

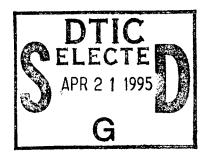
### Defense Nuclear Agency Alexandria, VA 22310-3398



**DNA-TR-93-168-V2** 

### Johnston Atoll Plutonium Cleanup Project Plant Modification and Operation Volume 2—Annual Report Option Year 2 Appendix A

Kathleen S. Moroney John D. Moroney III Nels R. Johnson TMA/Eberline 5635 Jefferson Street, NE P.O. Box 3874 Albuquerque, NM 87190-3874



**April 1995** 

**Technical Report** 

CONTRACT No. DNA 001-90-C-0119

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#### 13. ABSTRACT (Maximum 200 words)

This report continues the documentation of the operation of TMA/Eberline's Segmented Gate System technology for removing mixed plutonium and americium contamination at DNA's Johnston Atoll site. Contaminated feed is conveyed under arrays of radiation detectors coupled with sophisticated computer software developed by Eberline Instrument Corporation. Segmented gates (chutes) on pneumatically-driven pistons move forward when contamination is detected to remove only the contaminated portion from the main flow of feed material. Only about one pint of contaminant is removed during each diversion event. At the JA site, a 98% volume reduction has been achieved, with the remediated soil cleaned to DNA's criteria for release for unrestricted use of 500 Bq/kg total transuranic alpha contamination and no "hot" particles of greater than 5000 Becquerrels. The low level waste concentrate is expected to be packaged for shipment to an approved defense waste disposal site.

14. SUBJECT TERMS Radwaste Minimization Radioactive Waste Managem Radiological Remediation To	nent Tr	utonium Waste ansuranic Remediation	15. NUMBER OF PAGES 690 16. PRICE CODE				
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### **CONVERSION TABLE**

Conversion factors for U.S. Customary to metric (SI) units of measurement.

MULTIPLY	> BY	> TO GET
TO GET <	BY <	DIVIDE
angstrom	1.000 000 X E -10	meters (m)
atmosphere (normal)	1.013 25 X E +2	kilo pascal (kPa)
bar	1.000 000 X E +2	kilo pascal (kPa)
barn	1.000 000 X E -28	meter <sup>2</sup> (m <sup>2</sup> )
British thermal unit (thermochemical)	1.054 350 X E +3	joule (J)
calorie (thermochemical)	4.184 000	joule (J)
cal (thermochemical/cm <sup>2</sup>	4.184 000 X E -2	mega joule/m <sup>2</sup> (MJ/m <sup>2</sup> )
curie	3.700 000 X E +1	* giga becquerel (GBq)
degree (angle)	1.745 329 X E -2	radian (rad)
degree Fahrenheit	$t_K = (t^{\circ}f + 459.67)/1.8$	degree kelvin (K)
electron volt	1.602 19 X E -19	joule (J)
erg	1.000 000 X E -7	joule (J)
erg/second	1.000 000 X E -7	watt (W)
foot	3.048 000 X E -1	meter (m)
foot-pound-force	1.355 818	joule (J)
gallon (U.S. liquid)	3.785 412 X E -3	meter <sup>3</sup> (m <sup>3</sup> )
inch	2.540 000 X E -2	meter (m)
jerk	1.00 000 X E +9	joule (J)
joule/kilogram (J/kg) radiation dose	1.00 000 11 2	``````````````````````````````````````
absorbed	1.000 000	Gray (Gy)
kilotons	4.183	terajoules
	4.448 222 X E +3	newton (N)
kip (10000 lbf)	6.894 757 X E +3	kilo pascal (kPa)
kip/inch² (ksi)	1.000 000 X E +2	newton-second/m <sup>2</sup> (N-s/m <sup>2</sup> )
ktap	1.000 000 X E -6	meter (m)
micron	2.540 000 X E -5	meter (m)
mil	1.609 344 X E +3	meter (m)
mile (international)	2.834 952 X E -2	kilogram (kg)
ounce	4.448 222	newton (N)
pound-force (lbs avoirdupois)	1.129 848 X E +2	newton-meter (N·m)
pound-force inch	1.751 268 X E +2	newton/meter (N/m)
pound-force/inch	4.788 026 X E -2	kilo pascal (kPa)
pound-force/foot <sup>2</sup>	6.894 757	kilo pascal (kPa)
pound-force/inch² (psi)	4.535 924 X E -1	kilogram (kg)
pound-mass (lbm avoirdupois)	4.535 924 X E -1 4.214 011 X E -2	kilogram-meter <sup>2</sup> (kg·m <sup>2</sup> )
pound-mass-foot <sup>2</sup> (moment of inertia)		kilogram/meter <sup>2</sup> (kg-m <sup>3</sup> )
pound-mass-foot <sup>3</sup>	1.601 846 X E +1	** Gray (Gy)
rad (radiation dose absorbed)	1.000 000 X E -2	coulomb/kilogram (C/kg)
roentgen	2.579 760 X E -4	·
shake	1.000 000 X E -8	second (s)
slug	1.459 390 X E +1	kilogram (kg)
torr (mm Hg, O°C)	1.333 22 X E -1	kilo pascal (kPa)

<sup>\*</sup>The becquerel (Bq) is the SI unit of radioactivity: 1 Bq = 1 event/s.

\*\*The Gray (GY) is the SI unit of absorbed radiation.

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Appendi	x												Page
A	JA	SOIL	CLEANUP	PLANT	LOG	SUMMARIES	•		•	•		•	A-1

Accesion	n For	·	
NTIS DTIC Unanno Justifica	TAB unced	4	
By Distribu	ıtion/		
A	vailabilit	y Codes	
Dist	Avail a Spe		
A-1			, , , , , , , , , , , , , , , , , , ,

# APPENDIX JA SOIL CLEANUP PLANT LOG SUMMARY

15-May-93

SORTER 1 13 11dy 75				
AVERAGE BACKGROUND COUNT RATE	0.78	± 0.03 c/sec		
SORTER SOIL DENSITY	1.35 to	ns/m³		
GROUND SOIL DENSITY	1.65 to		e. = 11	
and the second second		CONTAMINATED	CLEAN	
MASS TOTAL		0.45 tons	110.6 tons	
MAXIMUM/SORT		5.5 kg	62.9 kg	
MINIMUM/SORT		0.8 kg	57.4 kg	
	augny			99.6%
WEIGHT RECOVERY OR VOLUME REC	OVERT	0.36 yd <sup>3</sup>	87.6 yd³	88.0 yd3/day
EQUIVALENT SOIL-IN-GROUND		,		
PARTICLE ACTIVITY (MAXIMUM ES	TIMATE)			
TOTAL		8,357 kBq		
MAXIMUM/SORT		643 kBq		
MINIMUM/SORT		2.4 kBq		
DISPERSED + PARTICLE (REALIS	TIC ESTIMATE) ACTIVITY	2,570 kBq	2,315 kBq	
		362 kBq	14 kBq	
MAXIMUM/SORT MINIMUM/SORT		0 Bq	-8 kBq	
SPECIFIC ACTIVITY		5,705 Bq/kg	21 Bq/kg	ı
WORK HISTORY	04:30 AM	WORK DAY END	03:30 PM	
WORK DAY START		PLANT SHUT-DOWN	03:30 PM	
PLANT START-UP	04:30 AM	END SOIL PROCESSING	02:46 PM	
START SOIL PROCESSING	04:58 AM	LUNCH PERIOD	0.0 hr	
LUNCH START	11:30 AM	2010111 1 21122		
WORK HOURS		11.0 hr		
AVAILABLE HO	URS	11.0 hr		
ACTUAL PROCE	SS HOURS (total 20-sec rec	ords) 9.81 hr		
DOWN-TIME		1.19 hr		
TOTAL SYSTEM	PAUSE	0.00 hr		
NONAVAILABLE	HOURS	0.0 hr		
START-UP		0.47 hr		
SHUT-DOWN		0.73 hr		
PLANT PERFOR	MANCE	89.1%		
PRODUCTIVITY		89.1%		
TOTAL SOIL PROCESSING RECORD	S (2-SEC and 20-SEC)	2,197		
NONPROCESS RECORDS (Test, ca		7		
20-SEC PROCESS RECORD		1,765		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		1,478 AD=0 & MD=0		
SOME SORT		287 AD>0&0 <md<mm< td=""><td>IDmax&amp;MND<mndmax< td=""><td></td></mndmax<></td></md<mm<>	IDmax&MND <mndmax< td=""><td></td></mndmax<>	
	RECORDS	0		
IINFYPI ATNFN			UNEXPLAIN	PAUSE
UNEXPLAINED				
0 <ad<1kbq &<="" td=""><td>MD&gt;0 4</td><td></td><td>TIME</td><td>TIME</td></ad<1kbq>	MD>0 4		TIME	TIME
0 <ad<1kbq &<="" td=""><td>MD&gt;0 4</td><td></td><td>TIME 05:19:00 07:46:00</td><td>TIME None</td></ad<1kbq>	MD>0 4		TIME 05:19:00 07:46:00	TIME None

17,650

09:40:40

2	-SEC COU	NT PERIODS				17,650					9:40:40
		2-SEC RECORD					(ACT_P	>0 kBq)		1	1:31:40
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR					
		2	DETECTO	RS	80		83.3%				
		3	DETECTO	RS	12		12.5%				
		4	DETECTO	RS	3		3.1%				
		5	DETECTO	RS	1		1.0%				
		6	DETECTO	RS	0		0.0%				
		7	DETECTO	RS	0		0.0%				
		8	DETECTO	RS	0		0.0%				
		T	OTAL			96					
		NET 2-SEC RE	CORDS WI	TH SORTS		336					
		2-SEC PERIOD	S WITH N	O SORTS		17,314					
		AVG TIME BET	WEEN 2-S	EC SORTS		105.1	sec				
										50509	ACT D
1-GATE S		221	ACT_ND		SPEC_A			ACT_P		FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)
1	2	0.9%	-14000	0	-223			4000	21	4.9%	4
2	17	7.7%	-12000	0	-191			8000	195	45.1%	8
3	26	11.8%	-10000	0	-159			12000	70	16.2%	12
4	45	20.4%	-8000	2	-127			16000	29	6.7%	16
5	46	20.8%	-6000	15	-95			20000	26	6.0%	20
6	29	13.1%	-4000	60	-64			24000	12		24
7	44	19.9%	-2000	177	-32			28000	14	3.2%	28
8	12	5.4%	0	331	0			32000	10	2.3%	32
TOTAL	221	31410	2000	466	32			36000	9	2.1%	36
TOTAL			4000	406	64			40000	4	0.9%	40
2-GATE S	ORTS	211	6000	185	95			44000	3		44
DETECTR	SORTS	FREQ%	8000	105	127			48000	3	0.7%	48
8	-		10000	19	159			52000	4	0.9%	52
9	11	5.2%	12000	3	191			56000	2	0.5%	56
10	11	5.2%	14000	3	223			60000	4	0.9%	60
11	37	17.5%	16000	0	254			64000	4	0.9%	64
12	40	19.0%	18000	0	286			68000	2	0.5%	68
13	43	20.4%	20000	0	318			72000	3	0.7%	72
14	37	17.5%	22000	0	350			76000	3	0.7%	76
15	32	15.2%	24000	0	382			80000	1	0.2%	80
TOTAL	211		26000	0	413			84000	2	0.5%	84
			>28000	0	0		>	84000	11	2.5%	>84
			TOTAL	1772				TOTAL	432		
SUMMARY	TOTALS										
Ħ	OT PARTI	CLE EVENTS	453		SORTS BY	ONE G	ATE ONL	.Υ	221		
P	<b>ULTIPART</b>	ICLE EVENTS	113		SORTS BY	r TWO G	ATES		211		
C	ISTRIBUT	ED EVENTS	0								

#### REC CODE EXPLANATION

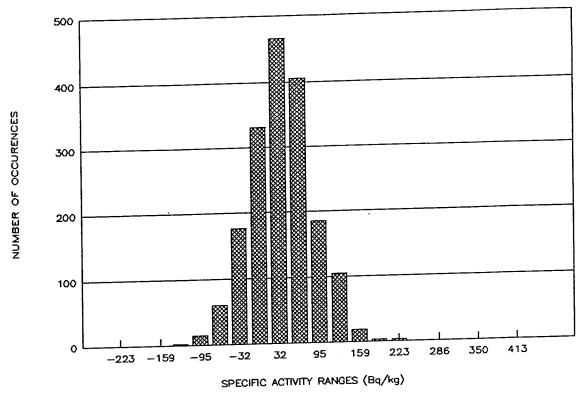
2-SEC COUNT PERIODS

<sup>1.00</sup> Source check (Soil on belt)

<sup>2.00</sup> Empty belt

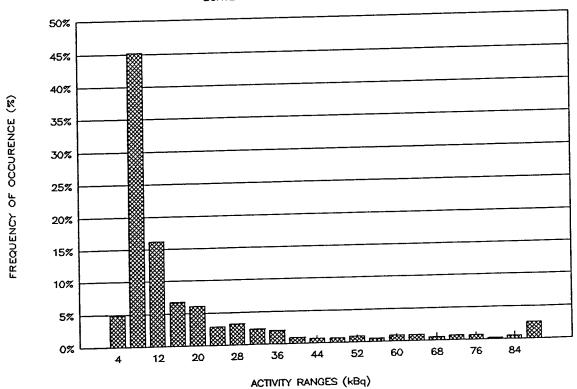
<sup>3.00</sup> Test (No process soil)

SORTER 1 LOG DATA FOR 15-May-93



### JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 15-May-93



A-4

SORTER 2 15-May-93									
AVERAGE BACKGROUND COUNT RATE		0.80	±	0.02	c/sec				
SORTER SOIL DENSITY		1.35	tons/m	13					
GROUND SOIL DENSITY		1.65	tons/m	2					
						INATED	CLEAN		
MASS TOTAL						tons	110.8		
MAXIMUM/SORT					5.5	•	62.9	_	
MINIMUM/SORT					0.8	kg	57.4	kg	
WEIGHT RECOVERY OR VOLUME REC	OVERY								99.6%
EQUIVALENT SOIL-IN-GROUND					0.33	yd <sup>3</sup>	87.8	yd³	88.2 yd3/day
PARTICLE ACTIVITY (MAXIMUM ES	TIMATE								
TOTAL	(110112)				11,479	kBq			
MAXIMUM/SORT	•				•	kBq			
MINIMUM/SORT						kBq			
THE THOMAS OF THE						•			
DISPERSED + PARTICLE (REALIST	IC ESTIMATE) ACTIV	ΙΤΥ			3,492	kBq	1,107	kBq	
MAXIMUM/SORT					342	kBq	10	kBq	
MINIMUM/SORT					0	Bq	-11	kBq	
SPECIFIC ACTIVITY					8,469	Bq/kg	10	Bq/kg	
WORK HISTORY									
WORK DAY START	04:30 AM				WORK D	AY END	03:30 PM		
PLANT START-UP	04:30 AM				PLANT	SHUT-DOWN	03:30 PM		
START SOIL PROCESSING	04:57 AM				END SO	IL PROCESSING	02:46 PM		
LUNCH START	11:30 AM				LUNCH	PER I OD	0.0	hr	
WORK HOURS						11.0 hr			
AVAILABLE HOU	RS					11.0 hr			
ACTUAL PROCES	S HOURS (total 20-	sec r	ecords)			9.82 hr			-
DOWN-TIME						1.18 hr			
TOTAL SYSTEM	PAUSE					0.00 hr			
NONAVAILABLE	HOURS					0.0 hr			
START-UP						0.46 hr			
SHUT-DOWN						0.72 hr			
PLANT PERFORM	ANCE					89.3%			
PRODUCTIVITY						89.3%			
TOTAL SOIL PROCESSING RECORDS	(2-SEC and 20-SEC	)				2,187			
NONPROCESS RECORDS (Test, cal						4			
20-SEC PROCESS RECORDS					1,768	3			
TOTAL SORT					C	) MD>0 & MND=0			
NO SORT					1,506	AD=0 & MD=0	& MND>0		
SOME SORT					262	AD>0&0 <md<< td=""><td>Omax&amp;MND<m< td=""><td>NDmax</td><td></td></m<></td></md<<>	Omax&MND <m< td=""><td>NDmax</td><td></td></m<>	NDmax	
UNEXPLAINED R	ECORDS				(	)			
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AD	=0 & MD 0						TIME		TIME
AD	<0 & MD 0						05:45:01		None
ACT P <5 kBq	60	14.3	4				08:41:01		

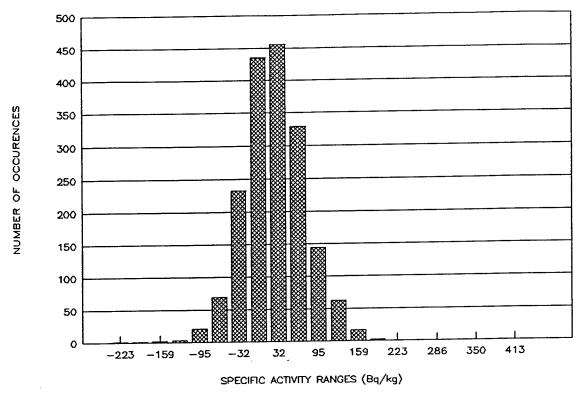
2-SEC RECORDS WITH SORTS 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR 2 DETECTORS 101 81.5X 3 DETECTORS 18 14.5X 4 DETECTORS 4 3.2X 5 DETECTORS 1 0.8X 6 DETECTORS 0 0.00X 7 DETECTORS 0 0.00X 8 DETECTORS 0 0.00X 1 TOTAL 124  NET 2-SEC RECORDS WITH SORTS 295 2-SEC PERIODS WITH NO SORTS 17,385 AVG TIME BETWEEN 2-SEC SORTS 119.9 Sec  1-GATE SORTS 225 ACT_ND NUMBER SPEC_A ACT_P SORT FREQX (Bq) (#) (Bq/kg) (Bq) (#) (kBq)  1 14 6.2X -14000 1 -223 4000 14 3.3X 4 2 33 14.7X -12000 1 -191 8000 175 41.8X 8 3 51 22.7X -10000 2 -159 12000 75 17.9X 12 4 46 20.4X -8000 3 -127 16000 75 17.9X 12 4 46 20.4X -8000 3 -127 16000 75 17.9X 12 4 46 20.4X -8000 3 -127 16000 75 17.9X 12 4 46 20.4X -8000 3 -127 16000 75 17.9X 12 4 46 20.4X -8000 3 -127 16000 75 17.9X 12 4 46 20.4X -8000 3 -127 16000 75 17.9X 12 4 46 20.4X -8000 3 -127 16000 75 17.9X 12 4 46 20.4X -8000 3 -127 16000 75 17.9X 12 4 46 20.4X -8000 3 -127 16000 75 17.9X 12 4 46 20.4X -8000 3 -127 16000 75 17.9X 12 4 46 20.4X -8000 3 -127 16000 75 17.9X 12 5 48 21.3X -6000 20 -95 20000 12 2.9X 20 6 25 11.1X -4000 69 -64 24000 20 4.8X 24 7 6 2.7X -2000 232 -32 28000 12 2.9X 28 8 2 0.9X 0 435 0 32000 11 2.0X 28 8 2 0.9X 0 435 0 32000 11 2.0X 28 8 2 0.9X 0 435 0 32000 11 2.0X 28 10TOTAL 225 2000 456 32 36000 71 1.7X 36 4000 329 64 40000 4 1.0X 40 2-GATE SORTS FREQX 8000 62 127 48000 0 0.0X 48 8 1000 16 159 52000 4 1.0X 40 2-GATE SORTS FREQX 8000 62 127 48000 0 0.0X 48 9 18 9.3X 12000 2 1911 56000 6 1.4X 56 10 31 16.0X 14000 0 223 640000 4 1.0X 66 11 41 21.1X 16000 0 223 640000 4 1.0X 66 11 41 21.1X 16000 0 2254 640000 4 1.0X 66	2-650	COL	NT DEDIONS				17,680				10	):59:41
2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR  2 DETECTORS 101 81.5% 3 DETECTORS 18 14.5% 4 DETECTORS 4 3.2% 5 DETECTORS 1 0.8% 6 DETECTORS 0 0.0% 7 DETECTORS 0 0.0% 7 DETECTORS 0 0.0% 8 DETECTORS 0 0.0% 1 124 NET 2-SEC RECORDS WITH SORTS 295 2-SEC PERIODS WITH NO SORTS 17,385 AVG TIME BETWEEN 2-SEC SORTS 119.9 Sec  1-GATE SORTS 225 ACT_ND NUMBER SPEC_A 8CT_P SORT FREQ% (Bq) (#) (Bq/kg) (Bq) (#) (KBq)  1 14 6.2% -14000 1 -223 4000 14 3.3% 4 2 33 14.7% -12000 1 1-191 8000 175 41.8% 8 3 51 22.7% 10000 2 -159 12000 75 17.9% 12 4 46 20.4% -8000 3 -127 16000 27 6.4% 16 5 48 21.3% -6000 20 -95 20000 12 2.9% 20 6 25 11.1% -4000 69 -64 24000 27 6.4% 16 5 48 21.3% -6000 20 -95 20000 12 2.9% 20 6 25 11.1% -4000 69 -64 24000 27 6.4% 16 5 48 21.3% -6000 20 -95 20000 12 2.9% 20 6 25 11.1% -4000 69 -64 24000 27 6.4% 16 5 48 21.3% -6000 30 -95 20000 12 2.9% 20 6 25 11.1% -4000 69 -64 24000 27 6.4% 16 5 48 21.3% -6000 30 -95 20000 12 2.9% 20 6 25 11.1% -4000 69 -64 24000 27 6.4% 16 5 48 21.3% -6000 30 -95 20000 12 2.9% 20 6 25 11.1% -4000 69 -64 24000 27 6.4% 16 5 48 21.3% -6000 30 -95 20000 12 2.9% 20 6 25 10.0% 30 32000 11 2.6% 32 TOTAL 225 2000 456 32 36000 7 1.7% 36 8 2 0.9% 0 435 0 32000 11 2.6% 32 TOTAL 225 8000 62 127 48000 0 0.0% 44 DETECTR SORTS FREQ% 8000 62 127 48000 0 0.0% 44 DETECTR SORTS FREQ% 8000 62 127 48000 0 0.0% 44 DETECTR SORTS FREQ% 8000 62 127 48000 0 0.0% 44 DETECTR SORTS FREQ% 8000 62 127 48000 0 0.0% 44 DETECTR SORTS FREQ% 8000 62 127 48000 0 0.0% 45 9 18 9.3% 12000 2 191 56000 6 1.4% 56 10 31 16.0% 14000 0 223 60000 4 1.0% 60 11 41 21.1% 16000 0 254 640000 4 1.0% 60 11 41 21.1% 16000 0 223 60000 4 1.0% 66	2-350			12 HTTU 2	DRTS.			(ACT P	>0 kBq)			
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B DETECTORS   124   124   124   124   124   124   124   124   124   124   124   124   124   124   125   1295   1200   120												
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1-GATE SORTS								sec				
T-GATE SURTS  FREQX  (Bq)  (#)  (Bq/kg)  (Bq)  (#)  (Bq)  (Bq)  (H)  (Bq)			AVG TIME BET	HCCN 2-3	-C 30K10							
DETECTR         SORTS         FREQX         (Bq)         (#) (Bq/kg)         (Bq)         (#)         (kBq)           1         14         6.2% -14000         1         -223         4000         14         3.3%         4           2         33         14.7% -12000         1         -191         8000         175         41.8%         8           3         51         22.7% -10000         2         -159         12000         75         17.9%         12           4         46         20.4% -8000         3         -127         16000         27         6.4%         16           5         48         21.3% -6000         20         -95         20000         12         2.9%         20           6         25         11.1% -4000         69         -64         24000         20         4.8%         24           7         6         2.7% -2000         232         -32         28000         12         2.9%         28           8         2         0.9%         0         435         0         32000         11         2.6%         32           TOTAL         225         2000         456         32	1-GATE SORTS	3	. 225	ACT_ND	NUMBER	SPEC_A			ACT_P		FREQ%	_
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5 48 21.3% -6000 20 -95 20000 12 2.9% 20 6 25 11.1% -4000 69 -64 24000 20 4.8% 24 7 6 2.7% -2000 232 -32 28000 12 2.9% 28 8 2 0.9% 0 435 0 32000 11 2.6% 32 TOTAL 225 2000 456 32 36000 7 1.7% 36 4000 329 64 40000 4 1.0% 40 2-GATE SORTS 194 6000 144 95 44000 2 0.5% 44 DETECTR SORTS FREQ% 8000 62 127 48000 0 0.0% 48 8 10000 16 159 52000 4 1.0% 52 9 18 9.3% 12000 2 191 56000 6 1.4% 56 10 31 16.0% 14000 0 223 60000 4 1.0% 60 11 41 21.1% 16000 0 254 64000 4 1.0% 64		46	20.4%	-8000	3	-127			16000			
6 25 11.1% -4000 69 -64 24000 20 4.8% 24 7 6 2.7% -2000 232 -32 28000 12 2.9% 28 8 2 0.9% 0 435 0 32000 11 2.6% 32  TOTAL 225 2000 456 32 36000 7 1.7% 36 4000 329 64 40000 4 1.0% 40  2-GATE SORTS 194 6000 144 95 44000 2 0.5% 44  DETECTR SORTS FREQ% 8000 62 127 48000 0 0.0% 48 8 10000 16 159 52000 4 1.0% 52 9 18 9.3% 12000 2 191 56000 6 1.4% 56 10 31 16.0% 14000 0 223 60000 4 1.0% 60 11 41 21.1% 16000 0 254 64000 4 1.0% 64		48		-6000	20	-95			20000	12		
7 6 2.7% -2000 232 -32 28000 12 2.9% 28 8 2 0.9% 0 435 0 32000 11 2.6% 32  TOTAL 225 2000 456 32 36000 7 1.7% 36 4000 329 64 40000 4 1.0% 40  2-GATE SORTS 194 6000 144 95 44000 2 0.5% 44  DETECTR SORTS FREQ% 8000 62 127 48000 0 0.0% 48 8 10000 16 159 52000 4 1.0% 52 9 18 9.3% 12000 2 191 56000 6 1.4% 56 10 31 16.0% 14000 0 223 60000 4 1.0% 60 11 41 21.1% 16000 0 254 64000 4 1.0% 64				-4000	69	-64			24000			
8 2 0.9% 0 435 0 32000 11 2.6% 32  TOTAL 225 2000 456 32 36000 7 1.7% 36  4000 329 64 40000 4 1.0% 40  2-GATE SORTS 194 6000 144 95 44000 2 0.5% 44  DETECTR SORTS FREQX 8000 62 127 48000 0 0.0% 48  8 10000 16 159 52000 4 1.0% 52  9 18 9.3% 12000 2 191 56000 6 1.4% 56  10 31 16.0% 14000 0 223 60000 4 1.0% 60  11 41 21.1% 16000 0 254 64000 4 1.0% 64				-2000	232	-32			28000	12		
TOTAL 225 2000 456 32 36000 7 1.7% 36 4000 329 64 40000 4 1.0% 40 2-GATE SORTS 194 6000 144 95 44000 2 0.5% 44 DETECTR SORTS FREQ% 8000 62 127 48000 0 0.0% 48 8 10000 16 159 52000 4 1.0% 52 9 18 9.3% 12000 2 191 56000 6 1.4% 56 10 31 16.0% 14000 0 223 60000 4 1.0% 60 11 41 21.1% 16000 0 254 64000 4 1.0% 64 11 41 21.1% 16000 0 254 64000 3 0.7% 68			0.9%	0	435	0			32000	11		
4000 329 64 40000 4 1.0% 40  2-GATE SORTS 194 6000 144 95 44000 2 0.5% 44  DETECTR SORTS FREQ% 8000 62 127 48000 0 0.0% 48  8 10000 16 159 52000 4 1.0% 52  9 18 9.3% 12000 2 191 56000 6 1.4% 56  10 31 16.0% 14000 0 223 60000 4 1.0% 60  11 41 21.1% 16000 0 254 64000 4 1.0% 64				2000	456	32			36000	7		
2-GATE SORTS 194 6000 144 93 48000 0 0.0% 48  DETECTR SORTS FREQ% 8000 62 127 48000 0 0.0% 48  8 10000 16 159 52000 4 1.0% 52  9 18 9.3% 12000 2 191 56000 6 1.4% 56  10 31 16.0% 14000 0 223 60000 4 1.0% 60  11 41 21.1% 16000 0 254 64000 4 1.0% 64			,	4000	329	64			40000	4		
DETECTR         SORTS         FREQX         8000         62         127         48000         0         0.0%         48           8         10000         16         159         52000         4         1.0%         52           9         18         9.3%         12000         2         191         56000         6         1.4%         56           10         31         16.0%         14000         0         223         60000         4         1.0%         60           11         41         21.1%         16000         0         254         64000         4         1.0%         64           11         45         20.7%         68         68         68         68         68	2-GATE SORTS	s	194	6000	144	95			44000	2		
8 10000 16 159 52000 4 1.0% 52 9 18 9.3% 12000 2 191 56000 6 1.4% 56 10 31 16.0% 14000 0 223 60000 4 1.0% 60 11 41 21.1% 16000 0 254 64000 4 1.0% 64			FREQ%	8000	62	127			48000	0		
9 18 9.3% 12000 2 191 56000 6 1.4% 56 10 31 16.0% 14000 0 223 60000 4 1.0% 60 11 41 21.1% 16000 0 254 64000 4 1.0% 64				10000	16	159			52000	4		
10 31 16.0% 14000 0 223 60000 4 1.0% 60 11 41 21.1% 16000 0 254 64000 4 1.0% 64		18	9.3%	12000	2	191			56000	. 6		
11 41 21.1% 16000 0 254 64000 4 1.0% 64			16.0%	14000	0	223			60000			
200 49000 3 0.7% 68				16000	0	254			64000	4		
	12	44	22.7%	18000	0	286			68000	3		
13 41 21.1% 20000 0 318 72000 7 1.7% 72				20000	0	318			72000	7	1.7%	
14 18 9.3% 22000 0 350 76000 2 0.5% 76					0	350			76000	2		
15 1 0.5% 24000 0 382 80000 2 0.5% 80					0	382			80000	2		
TOTAL 194 26000 0 413 84000 3 0.7% 84			••••		0	413			84000	3	0.7%	84
>28000 0 0 >84000 25 6.0% >84	TOTAL	.,,			0	0		;	84000	25	6.0%	>84
TOTAL 1772 TOTAL 419					1772				TOTAL	419		
SUMMARY TOTALS	SUMMARY TOTAL	ALS										
HOT PARTICLE EVENTS 401 SORTS BY ONE GATE ONLY 225			CLE EVENTS	401		SORTS BY	ONE G	ATE ON	Υ.			
MULTIPARTICLE EVENTS 118 SORTS BY TWO GATES 194				118		SORTS BY	TWO G	ATES		194		
DISTRIBUTED EVENTS 0				0								

### REC CODE EXPLANATION

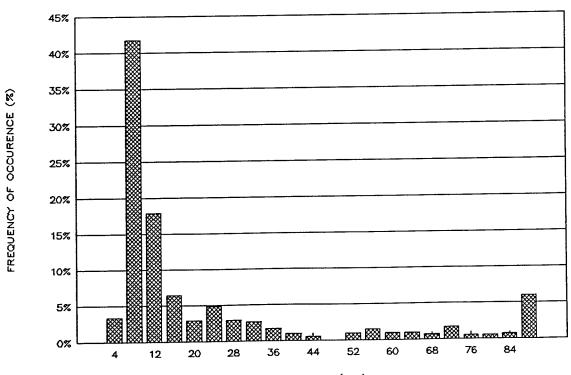
1.00 Source check (Soil on belt)

2.00 Empty belt

SORTER 2 LOG DATA FOR 15-May-93



## JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 15-May-93



ACTIVITY RANGES (kBq)

SORTER 1 14-May-93				÷
AVERAGE BACKGROUND COUNT RATE	0.78 ± 0.0	04 c/sec		
SORTER SOIL DENSITY	1.35 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³			
GROOM GOLL SENSITI		CONTAMINATED	CLEAN	
MASS TOTAL		0.53 tons	115.6 tons	
MAXIMUM/SORT		7.1 kg	62.9 kg	
MINIMUM/SORT		0.8 kg	55.8 kg	
•				00.5%
WEIGHT RECOVERY OR VOLUME RECOVER	XY			99.5%
EQUIVALENT SOIL-IN-GROUND		0.42 yd <sup>3</sup>	91.7 yd <sup>3</sup>	92.1 yd3/day
PARTICLE ACTIVITY (MAXIMUM ESTIMA	ITE)			
TOTAL		10,445 kBq		•
MAXIMUM/SORT		719 kBq		
MINIMUM/SORT		2.9 kBq		
-				
DISPERSED + PARTICLE (REALISTIC E	STIMATE) ACTIVITY	3,321 kBq	4,677 kBq	
MAXIMUM/SORT		486 kBq	22 kBq	
MINIMUM/SORT		0 Bd	-7 kBq	
SPECIFIC ACTIVITY		6,241 Bq/kg	40 Bq/kg	l
WORK HISTORY			05.70.04	
WORK DAY START	06:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	06:00 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:09 AM	END SOIL PROCESSING	0.0 hr	
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 111	
	•	11.5 hr		
WORK HOURS		11.5 hr		
AVAILABLE HOURS	DURS (total 20-sec records)	10.26 hr		
	JURS (LOCAL 20-Sec Lecolds)	1.24 hr		
DOWN-TIME	```	0.76 hr		
TOTAL SYSTEM PAUS		0.0 hr		
NONAVAILABLE HOUF	(3	0.16 hr		
START-UP		0.28 hr		
SHUT-DOWN	=	89.2%		
PLANT PERFORMANCE		89.2%		
PRODUCTIVITY				
TOTAL SOIL PROCESSING RECORDS (2	SEC and 20-SEC)	2,369		
NONPROCESS RECORDS (Test, calibra		19		
20-SEC PROCESS RECORDS	•	1,847		
TOTAL SORT		0=DMM & 0 <dm 0<="" td=""><td></td><td></td></dm>		
NO SORT		1,520 AD=0 & MD=0		
SOME SORT		327 AD>0&0 <md<mn< td=""><td>Dmax&amp;MND<mndmax< td=""><td></td></mndmax<></td></md<mn<>	Dmax&MND <mndmax< td=""><td></td></mndmax<>	
UNEXPLAINED RECO	RDS	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	2		UNEXPLAIN	PAUSE
AD=0 8	MD 0		TIME	TIME
AD<0 8			12:37:58	09:24
ACT_P <5 kBq	105 20.1%		16:57:58	11:59
••••				

18,470

	2-5	SEC COL	JNI PEKTOD2				10,410					
			2-SEC RECORD	S WITH S	ORTS		522	(ACT_P	>0 kBq)			
			2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR					
			2	DETECTO	RS	117		88.6%				
			3	DETECTO	RS	15		11.4%				
			4	DETECTO	RS	0		0.0%				
			5	DETECTO	RS	0		0.0%				
			6	DETECTO	RS	0		0.0%				
			7	DETECTO	RS	0		0.0%				
			8	DETECTO	RS	0		0.0%				
			T	OTAL			132					
			NET 2-SEC RE	CORDS WI	TH SORTS		390					
			2-SEC PERIOD	S WITH N	O SORTS		18,080					
			AVG TIME BET	WEEN 2-S	EC SORTS		94.7	sec				
1-GAT	re sof	RTS	263	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
DETEC	CTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)
	1	4	1.5%	-14000	0	-223			4000	25		4
	2	21	8.0%	-12000	0	-191			8000	246		8
	3	35	13.3%	-10000	2	-159			12000	77		12
	4	47	17.9%	-8000	8	-127			16000	43		16
	5	63	24.0%	-6000	6	-95			20000	30	5.7%	20
	6	45	17.1%	-4000	28	-64			24000	17	3.3%	24
	7	38	14.4%	-2000	109	-32			28000	9	1.7%	28
	8	10	3.8%	0	270	0			32000	9	1.7%	32
TOTA	<b>AL</b>	263		2000	461	32			36000	4	0.8%	36
				4000	463	64			40000	6	1.1%	40
2-GA1	TE SOF	RTS	259	6000	273	95			44000	7		44
DETEC	CTR	SORTS	FREQ%	8000	128	127			48000	8	1.5%	48
	8			10000	54	159			52000	6	1.1%	52
	9	11	4.2%	12000	30	191			56000	5		56
1	10	25	9.7%	14000	15	223			60000	1	0.2%	60
1	11	45	17.4%	16000	10	254			64000	6	1.1%	64
1	12	46	17.8%	18000	4	286			68000	5		68
1	13	61	23.6%	20000	3	318			72000	2	0.4%	72
1	14	44	17.0%	22000	2	350			76000	2	0.4%	76
1	15	27	10.4%	24000	0	382			80000	1	0.2%	80
TOTA	AL	259		26000	0	413			84000	0	0.0%	84
				>28000	0	0		>	84000	13	2.5%	>84
				TOTAL	1866				TOTAL	522		
SUMM/	ARY TO	DTALS										
	HO	PART!	ICLE EVENTS	521		SORTS BY	ONE G	ATE ONL	.Υ	263		
	MUI	TIPAR	TICLE EVENTS	149		SORTS BY	TWO G	ATES		259		
		/		_								

#### REC CODE EXPLANATION

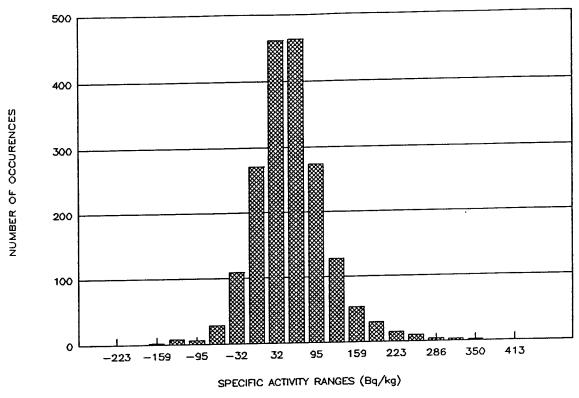
1.00 Source check (Soil on belt)

2.00 Empty belt

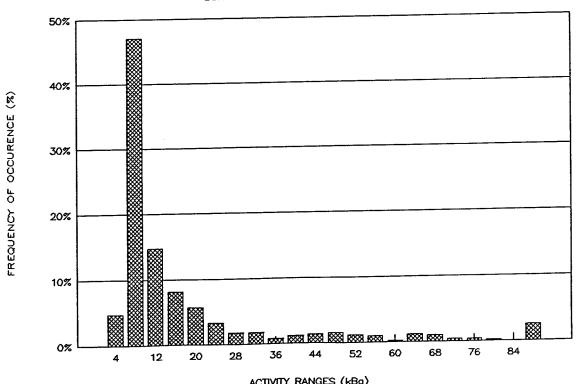
DISTRÍBUTED EVENTS 0

2-SEC COUNT PERIODS

SORTER 1 LOG DATA FOR 14-May-93



### JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 14-May-93



ACTIVITY RANGES (kBq)

A-10

SORTER 2 14-May-93					
AVERAGE BACKGROUND COUNT RATE		0.79 ± 0	.03 c/sec		
SORTER SOIL DENSITY		1.35 tons/m³			
GROUND SOIL DENSITY		1.65 tons/m³			
GROOM SOIL DEMOTIT		•	CONTAMINATED	CLEAN	
MASS TOTAL			0.50 tons	115.4 tons	5
MAXIMUM/SORT			4.7 kg	62.9 kg	
MINIMUM/SORT			0.8 kg	58.2 kg	
WEIGHT RECOVERY OR VOLUME RECOVE	RY				99.6%
EQUIVALENT SOIL-IN-GROUND			0.40 yd³	91.5 yd³	91.9 yd3/day
PARTICLE ACTIVITY (MAXIMUM ESTIM	ATE)				
TOTAL			8,014 kBq		
MAXIMUM/SORT			332 kBq		
MINIMUM/SORT			3.0 kBq		
DISPERSED + PARTICLE (REALISTIC	ESTIMATE) ACTIV	YTTY	2,629 kBq	3,748 kBq	
MAXIMUM/SORT			184 kBq	18 kBq	
MINIMUM/SORT			0 Bq	-8 kBq	
SPECIFIC ACTIVITY			5,235 Bq/kg	32 Bq/l	kg
WORK HISTORY					
WORK DAY START	MA 00:60		WORK DAY END	05:30 PM	
PLANT START-UP	06:00 AM		PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:09 AM		END SOIL PROCESSIN	IG 05:12 PM	
LUNCH START	11:30 AM		LUNCH PERIOD	0.0 hr	
WORK HOURS			11.5 hr		
AVAILABLE HOURS			11.5 hr		
ACTUAL PROCESS F	IOURS (total 20-	sec records)	10.24 hr		
DOWN-TIME			1.26 hr		
TOTAL SYSTEM PAU	ISE		0.76 hr		
NONAVAILABLE HOU	IRS		0.0 hr		
START-UP			0.15 hr		
SHUT-DOWN			0.29 hr		
PLANT PERFORMANO	Œ		89.0%		
PRODUCTIVITY			89.0%		
TOTAL SOIL PROCESSING RECORDS (2	2-SEC and 20-SEC	:)	2,340		
NONPROCESS RECORDS (Test, calib	ation, etc)		23		
20-SEC PROCESS RECORDS			1,843	_	
TOTAL SORT			0 MD>0 & MND=		
NO SORT			1,519 AD=0 & MD=0		
SOME SORT				INDmax&MND <mndma< td=""><td>x</td></mndma<>	x
UNEXPLAINED RECO			0	4000000	DAUCE
0 <ad<1kbq &="" md="">0</ad<1kbq>				UNEXPLAIN	PAUSE
AD=0				TIME	TIME
AD<0	0 QM &			08:01:59	09:24
ACT_P <5 kBq	87	17.5%		08:29:19	11:59

10:08:19

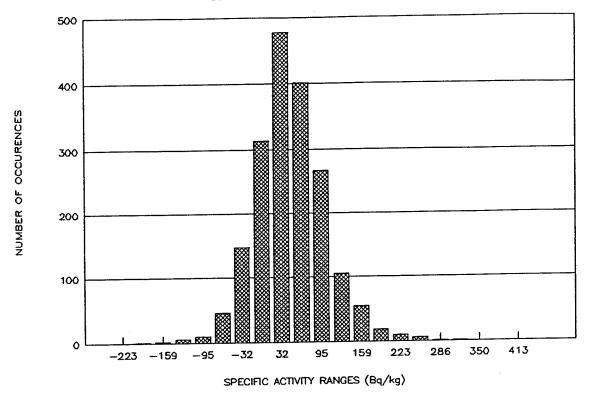
-	CEC CO	INT PERIODS			1	8,430					:08:19
2	-250 000	2-SEC RECORDS	אדוט פ	DETS.			(ACT_P	>0 kBq)			:04:59
		2-SEC RECORDS	. WITH D	DOITIVES	IN >1 DET		_			14	4:42:19
			DETECTO		98		83.1%				
		_	DETECTO		16		13.6%				
		_	DETECTO		3		2.5%				
			DETECTO		1		0.8%				
		_	DETECTO		0		0.0%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
			OTAL	N.S	•	118					
		NET 2-SEC RE		21902 UT		379					
		2-SEC PERIOD			•	18,051					
					,	97.3	sec				
		AVG TIME BET	WEEN 2-5	EC SUR13		,,,,					
1-GATE S	2190	259	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)		(Bq/kg)			(Bq)	(#)		(kBq)
DETECTA	0011.0		•								
1	12	4.6%	-14000	0	-223			4000	21	4.2%	4
2	43		-12000	1	-191			8000	234	47.1%	8
3	42		-10000	2	-159			12000	78	15.7%	12
4	60		-8000	6	-127			16000	50	10.1%	16
5	37		-6000	10	-95			20000	30	6.0%	20
6	33		-4000	46	-64			24000	14	2.8%	24
7	24		-2000	147	-32			28000	15	3.0%	28
8	8		0	313	0			32000	7	1.4%	32
	259		2000	478	32			36000	5	1.0%	36
TOTAL	237		4000	401	64			40000	3	0.6%	40
2-GATE	PODTS	238	6000	266	95			44000	6	1.2%	44
DETECTR	SORTS		8000	105	127			48000	3	0.6%	48
8	JORTS		10000	55	159			52000	2	0.4%	52
9	22	9.2%	12000	18	191			56000	3	0.6%	56
10	35		14000	10	223			60000	3	0.6%	60
11	47		16000	6	254			64000	2	0.4%	64
12	55		18000	1	286			68000	1	0.2%	68
13	42		20000	1	318			72000	4	0.8%	72
14	25		22000	0	350			76000	2	0.4%	76
	12		24000	0	382			80000	2	0.4%	80
15	238		26000	0				84000	3	0.6%	84
TOTAL	230	•	>28000	0	_			>84000	9	1.8%	>84
			TOTAL	1866				TOTAL	497		
CIENTER	TOTALE		ININE								
SUMMARY		ICLE EVENTS	504		SORTS BY	ONE C	ATE ON	LY .	259		
		TICLE EVENTS	127		SORTS BY				238		
		ITED EVENTS	0								
1	OT 21KID	TILD LICKIO	•								

### REC CODE EXPLANATION

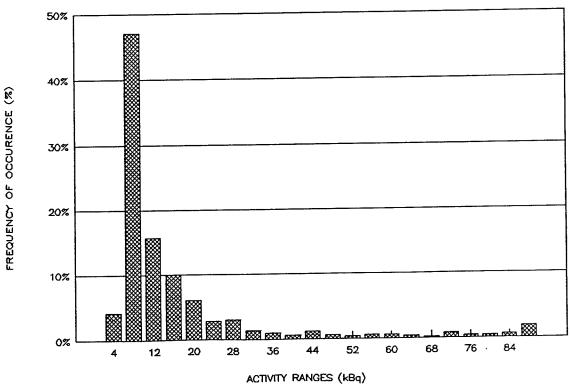
1.00 Source check (Soil on belt)

2.00 Empty belt

SORTER 2 LOG DATA FOR 14-May-93



JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 14-Moy-93



SORTER 1 13-May-93				
AVERAGE BACKGROUND COUNT RATE	0.79 ±	0.03 c/sec		
SORTER SOIL DENSITY	1.35 tons/	n <sup>3</sup>		
GROUND SOIL DENSITY	1.65 tons/	U <sub>2</sub>		
around total tames.		CONTAMINATED	CLEAN	
MASS TOTAL		0.55 tons	121.6 tons	
MAXIMUM/SORT		6.3 kg	62.9 kg	
MINIMUM/SORT		0.8 kg	56.6 kg	
				00 E¥
WEIGHT RECOVERY OR VOLUME RECOVERY			04 4d5	99.5% 96.8 yd³/day
EQUIVALENT SOIL-IN-GROUND		0.44 yd³	96.4 yd³	90.0 yu / day
PARTICLE ACTIVITY (MAXIMUM ESTIMATION	<b>:</b> )			
TOTAL		11,872 kBq		
MAXIMUM/SORT		1,328 kBq		
MINIMUM/SORT		2.9 kBq		
			5,096 kBq	
DISPERSED + PARTICLE (REALISTIC ES	TIMATE) ACTIVITY	3,839 kBq	17 kBq	
MAXIMUM/SORT		804 kBq	-8 k8q	
MINIMUM/SORT		0 Bq	42 Bq/kg	1
SPECIFIC ACTIVITY		6,959 Bq/kg	42 <b>04</b> / N3	•
WORK HISTORY	06:00 AM	WORK DAY END	05:30 PM	
WORK DAY START	06:00 AM	PLANT SHUT-DOWN	05:30 PM	
PLANT START-UP	06:13 AM	END SOIL PROCESSING	05:00 PM	
START SOIL PROCESSING	11:30 AM	LUNCH PERIOD	0.0 hr	
LUNCH START	(1.50 M)			
WORK HOURS		11.5 hr		
AVAILABLE HOURS		11.5 hr		
	RS (total 20-sec records	) 10.79 hr		
DOWN-TIME		0.71 hr		
TOTAL SYSTEM PAUSE		0.00 hr		
NONAVAILABLE HOURS		0.0 hr		
START-UP		0.22 hr		
SHUT-DOWN		0.50 hr		
PLANT PERFORMANCE		93.8%		
PRODUCTIVITY		93.8%		
		2,482		
TOTAL SOIL PROCESSING RECORDS (2-S		2,402		
NONPROCESS RECORDS (Test, calibrat	ion, etc)	1,942		
20-SEC PROCESS RECORDS		0 MD>0 & MND=0		
TOTAL SORT		1,596 AD=0 & MD=0		
NO SORT		345 AD>0&0 <md<mn< td=""><td></td><td></td></md<mn<>		
SOME SORT	•	1		
UNEXPLAINED RECORD		•	UNEXPLAIN	PAUSE
0 <ad<1kbq &="" md="">0</ad<1kbq>	2 MD 1		TIME	TIME
AD=0 &			10:05:53	None
AD<0 &	101 18.7%		13:30:33	
ACT_P <5 kBq	101 10.1%			

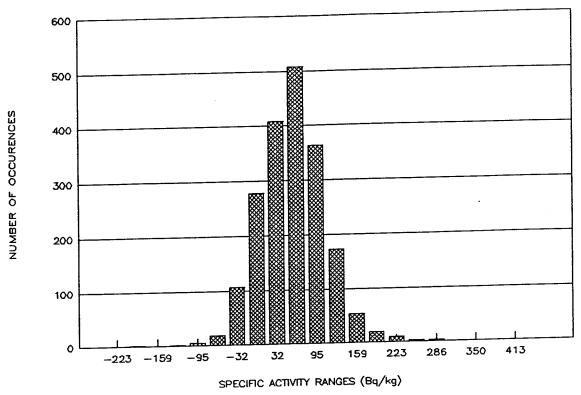
2	-SEC COL	INT PERIODS				19,420			1	4:35:33
_	020 000	2-SEC RECORD	S WITH S	ORTS			(ACT_P >0 kBd	<b>(</b> )		
		2-SEC RECORD			IN >1 DE					
			DETECTO		111		79.9%			
			DETECTO		23		16.5%			
			DETECTO		4		2.9%			
		5	DETECTO	RS	1		0.7%			
		6	DETECTO	RS	0		0.0%			
		7	DETECTO	RS	0		0.0%			
		8	DETECTO	RS	0		0.0%			
		T	OTAL			139				
		NET 2-SEC RE	CORDS WI	TH SORTS		401				
		2-SEC PERIOD	S WITH N	O SORTS		19,019				
		AVG TIME BET	WEEN 2-S	EC SORTS		96.9	sec			
		270	ACT NO	NUMBER	SPEC_A		ACT_P	SORT	FREQ%	ACT_P
1-GATE S		278 FREQ%	ACT_ND (Bq)		(Bq/kg)		(Bq)	(#)		(kBq)
DETECTR	SORTS	FREMA	(bq)	(#)	(64) (97)		<b>1047</b>	,		•
1	5	1.8%	-14000	0	-223		4000	24	4.4%	4
2	23	8.3%	-12000	1	-191		8000	241	44.6%	8
3	47	16.9%	-10000	0	-159		12000	79	14.6%	12
4	54	19.4%	-8000	1	-127		16000	48	8.9%	16
5	58	20.9%	-6000	4	-95		20000	32	5.9%	20
6	35	12.6%	-4000	17	-64		24000	25		24
7	40	14.4%	-2000	106	-32		28000	13	2.4%	28
8	16	5.8%	0	277	0		32000	7	1.3%	32
TOTAL	278		2000	409	32		36000	6		36
			4000	508	64		40000	11		40
2-GATE S	ORTS	262	6000	363	95		44000	3		44
DETECTR	SORTS	FREQ%	8000	173	127		48000	8		48
8			10000	53	159		52000	5		52
9	7	2.7%	12000	19	191		56000	4		56
10	38	14.5%	14000	9	223		60000	4	0.7%	60
11	47	17.9%	16000	2	254		64000	6	1.1%	64
12	60	22.9%	18000	2	286		68000	1	0.2%	68
13	42	16.0%	20000	0	318		72000	1	0.2%	72
14	30	11.5%	22000	0	350		76000	3		76
15	38		24000	0	382		80000	1	0.2%	80
TOTAL	262		26000	0	413		84000	1	0.2%	84
			>28000	0	0		>84000	17	3.1%	>84
			TOTAL	1944			TOTAL	540		
SUMMARY	TOTALS									
ŧ	IOT PART	ICLE EVENTS	536		SORTS BY	Y ONE G	ATE ONLY	278		
	(ULTIPAR	TICLE EVENTS	158		SORTS BY	Y TWO G	ATES	262		

### REC CODE EXPLANATION

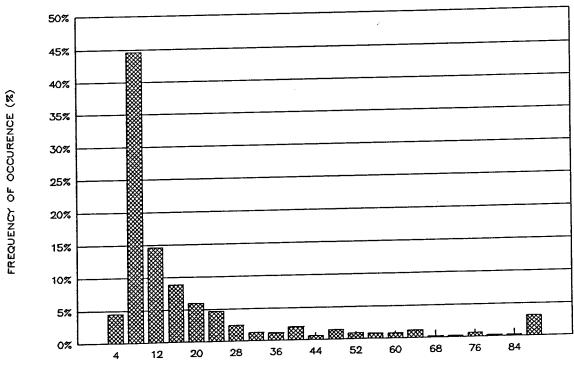
- 1.00 Source check (Soil on belt)
- 2.00 Empty belt

DISTRIBUTED EVENTS

SORTER 1 LOG DATA FOR 13-May-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 13-MOY-93



ACTIVITY RANGES (kBq)

A-16

SORTER 2	13-May-93								
AVERAGE BACKGROU	NO COUNT RATE		0.79	± 0.0	3 c/sec				
SORTER SOIL DENS			1.35	tons/m³					
GROUND SOIL DENS				tons/m³					
GROOMD SOIL DEMS					CONTAM	INATED	CLEAN		
WACC TOTAL					0.44	tons	121.6	tons	
MASS TOTAL	PORT				4.7	kg	62.9	kg	
MAXIMUM/S					0.8	kg	58.2	kg	
HINIMUM/S	OK I								
WEIGHT RECOVERY	OR VOLUME RECOVERY								99.6%
EQUIVALENT SOIL-					0.35	yd3	96.4	yd3	96.7 yd³/day
EGOLANCEM, SOLE	in dicono								
PARTICLE ACTIVIT	Y (MAXIMUM ESTIMATE	)							
TOTAL					- 7,787	' kBq			
MAXIMUM/S	SORT				718	kBq			
MINIMUM/S					3.1	kBq			
					2,628	, koa	4,441	kRa	
DISPERSED + PART	TICLE (REALISTIC EST	IMATE) ACTIV	1114		•	kBq		kBq	
MAXIMUM/S	SORT					•		kBq	
MINIMUM/S	SORT					) Bq i Bq/kg		Bq/kg	
SPECIFIC	ACTIVITY				6,033	bd/ kg		- <del></del>	
WORK HISTORY									
WORK DAY	START	06:00 AM			WORK D	AY END	05:30 PM		
PLANT ST		06:00 AM			PLANT	SHUT-DOWN	05:30 PM		
	L PROCESSING	06:13 AM			END SC	IL PROCESSING	04:59 PM		
LUNCH STA		11:30 AM			LUNCH	PER I OD	0.0	hr	
23									
	WORK HOURS					11.5 hr			***
	AVAILABLE HOURS					11.5 hr			
	ACTUAL PROCESS HOUR	S (total 20	-sec r	ecords)		10.78 hr			
	DOWN-TIME					0.72 hr			
	TOTAL SYSTEM PAUSE					0.00 hr			
	NONAVAILABLE HOURS					0.0 hr			
	START-UP					0.22 hr			
	SHUT-DOWN					0.51 hr			
	PLANT PERFORMANCE					93.7%			
	PRODUCTIVITY					93.7%			
TOTAL COLL BOOK	ESSING RECORDS (2-SE	r and 20-cF	C)			2,352			
	RDS (Test, calibrati		-,			4			
		ion, etc,			1,94	0			
20-3EC P	ROCESS RECORDS				•	0 MD>0 & MND=0			
	TOTAL SORT					2 AD=0 & MD=0			
	NO SORT					B AD>0&0 <md<mn< td=""><td></td><td>4NDmax</td><td></td></md<mn<>		4NDmax	
	SOME SORT UNEXPLAINED RECORDS	•				0			
		1					UNEXPLA	EN	PAUSE
	0 <ad<1kbq &="" md="">0 AD=0 &amp; 1</ad<1kbq>	_					TIME		TIME
	AD<0 & 1						14:46:53	3	None
	ACT P <5 kBq	-10 0 59	14.	3%					
	VOITE A KOM								

19,400

	2-356 60	DMI PEKTODS				(42	ACT D	>0 kpa1			
		2-SEC RECORD	S WITH SO	RTS	4		(ACI_P	>0 kBq)			
		2-SEC RECORD				TECTOR	o., o.,				
		2	DETECTOR	:S	92		86.0%				
		3	DETECTOR	:S	13		12.1%				
		4	DETECTOR	S	1		0.9%				
		5	DETECTOR	:S	1		0.9%				
		6	DETECTOR	lS .	0		0.0%				
		7	DETECTOR	s	0		0.0%				
		8	DETECTOR	lS .	0		0.0%				
		т	OTAL			107					
		NET 2-SEC RE		H SORTS		305					
		2-SEC PERIOD				19,095					
		AVG TIME BET				127.2					
		MAG LINE DEL	WEEK E O								
4 0475	CORTC	216	ACT_ND	NUMBER	SPEC_A	•		ACT_P	SORT	FREQ%	ACT_P
1-GATE			(Bq)		(Bq/kg)			(pg)	(#)		(kBq)
DETECTR	SORTS	FREMA	(64)	\",	(-4/)						
	•	. 29	-14000	0	-223			4000	12	2.9%	4
1	9		-12000	0	-191			8000	198	48.1%	8
2	25		-10000	0	-159			12000	75	18.2%	12
3	40			0	-127			16000	29	7.0%	16
4	46		-8000	9	-95			20000	19	4.6%	20
5	45		-6000	22	-64			24000	14	3.4%	24
6	36		-4000		-32			28000	9		28
7	12		-2000	124	- 32			32000	11	2.7%	32
8	3		0	310				36000	1	0.2%	36
TOTAL	216	•	2000	453	32			40000	1	0.2%	40
			4000	494	64			44000	5		44
2-GATE		196	6000	310	95			48000	3		48
DETECT	R SORTS	FREQ%	8000	142					4		52
8			10000	48				52000	2		56
9	12	6.1%	12000	24	191			56000			60
10	28	14.3%	14000	5				60000	7		64
11	45	23.0%	16000	2	254			64000	1		
12	49	25.0%	18000	1	286			68000	8		68
13	35		20000	0	318			72000	1		72
14	23		22000	0	350			76000	2		76
15	4		24000	0	382			80000	1		80
TOTAL	196		26000	0	413			84000	1	0.2%	84
			>28000	0	0		:	>84000	8	1.9%	>84
			TOTAL	1944				TOTAL	412		
SI BMMAR'S	Y TOTALS										
JOI # #1111		ICLE EVENTS	418		SORTS BY	ONE	ATE ON	LY	216		
		TICLE EVENTS	129		SORTS BY	r TWO G	ATES		196		
		ITED EVENTS	0								
	2.0111100										

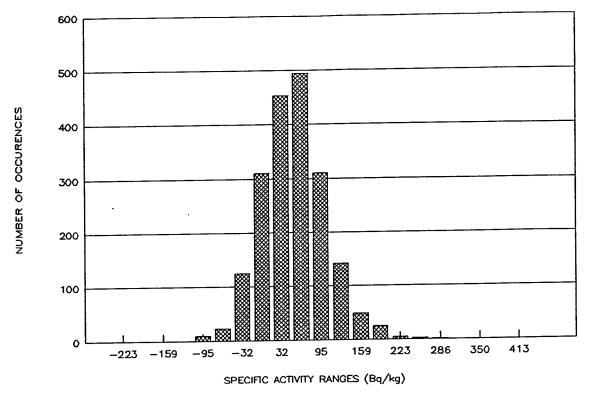
### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

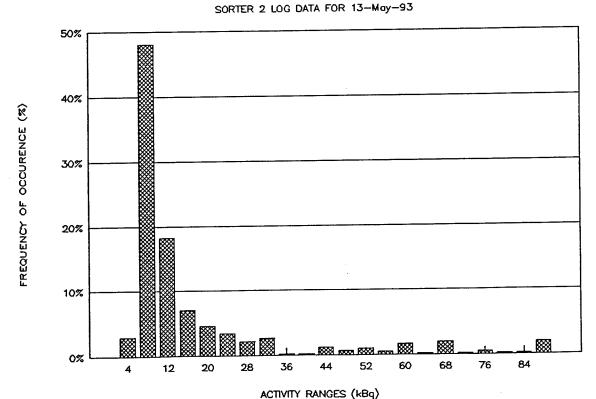
2.00 Empty belt

2-SEC COUNT PERIODS

SORTER 2 LOG DATA FOR 13-May-93



### JA SOIL CLEANUP PLANT HOT PARTICLES



A-19

SORTER 1 12-May-93				
AVERAGE BACKGROUND COUNT RATE	0.81 ± 0.	04 c/sec		
SORTER SOIL DENSITY	1.35 tons/m <sup>3</sup>			
GROUND SOIL DENSITY	1.65 tons/m³		CLEAN	
		CONTAMINATED	119.6 tons	
MASS TOTAL		1.13 tons	62.9 kg	
MAXIMUM/SORT		62.9 kg	57.4 kg	
MINIMUM/SORT		0.8 kg	31.4 49	
				99.1%
WEIGHT RECOVERY OR VOLUME RECOVER	r	0.90 yd³	94.8 yd3	95.7 yd3/day
EQUIVALENT SOIL-IN-GROUND		0.90 yu		
PARTICLE ACTIVITY (MAXIMUM ESTIMA	TE)	15,765 kBq		
. TOTAL		692 kBq		
MAXIMUM/SORT		2.5 kBq		
MINIMUM/SORT		2.5 1.54		
	ACTIVITY	5,363 kBq	5,667 kBq	
DISPERSED + PARTICLE (REALISTIC E	STIMATE) ACTIVITY	401 kBq	14 kBq	
MAXIMUM/SORT		0 Bq	-8 kBq	
MINIMUM/SORT		4,739 Bq/kg	47 8q/kg	l
SPECIFIC ACTIVITY		•		
WORK HISTORY			05:30 PM	
WORK DAY START	06:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	06:00 AM	PLANT SHUT-DOWN		
START SOIL PROCESSING	06:19 AM	END SOIL PROCESSING	0.0 hr	
LUNCH START	11:30 AM	LUNCH PERIOD	<b>0.0</b>	
		11.5 hr		
WORK HOURS		11.5 hr		
AVAILABLE HOURS	XURS (total 20-sec records)	10.66 hr		
	ARS (total 20 see tees. as)	0.84 hr		
DOWN-TIME TOTAL SYSTEM PAUS		0.00 hr		
NONAVAILABLE HOUF		0.0 hr		
		0.32 hr		
START-UP SHUT-DOWN		0.53 hr		
PLANT PERFORMANCE	<u> </u>	92.7%		
PRODUCTIVITY		92.7%		
	•	2 012		
TOTAL SOIL PROCESSING RECORDS (2	-SEC and 20-SEC)	2,912 10		
NONPROCESS RECORDS (Test, calibrate)	ation, etc)			
20-SEC PROCESS RECORDS		1,919 1 MD>0 & MND=0		
TOTAL SORT		1,269 AD=0 & MD=0		
NO SORT		648 AD>0&0 <md<mn< td=""><td>Dmax&amp;MND<mndmax< td=""><td></td></mndmax<></td></md<mn<>	Dmax&MND <mndmax< td=""><td></td></mndmax<>	
SOME SORT		1		
UNEXPLAINED RECO		•	UNEXPLAIN	PAUSE
0 <ad<1kbq &="" md="">0</ad<1kbq>			TIME	TIME
AD=0	_		07:43:22	None
AD<0	& MD 0 22.2%		07:55:42	
ACT_P <5 kBq	CLU CE.EM			

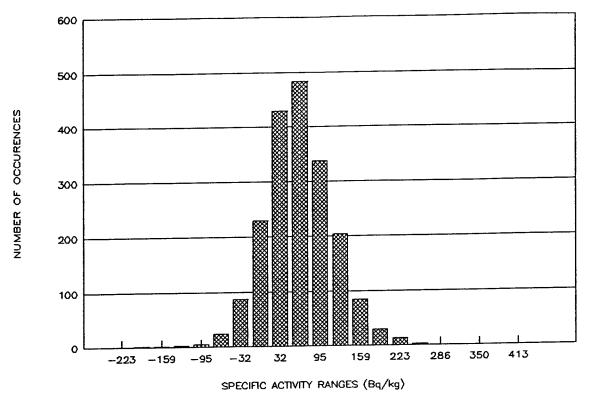
2		NT PERIODS 2-SEC RECORD	ORTS	19,190 993 (ACT_P >0 kBq)					08:44:42 08:55:22			
		2-SEC RECORD			IN >1 DE		••••	•		1	1:47:02	
	•		DETECTO		221		83.1%			1	5:24:02	
			DETECTO		39		14.7%				6:00:02	
			DETECTO		6		2.3%			·		
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
			DETECTOR OTAL	<b>(3</b>	·	266	0.0%					
		יו NET 2-SEC RE		ru contc		727						
						18,463						
		2-SEC PERIOD: AVG TIME BET!				52.8	car					
	,	AVG TIME BET	WEEN 2-31	EC SURTS		32.0	SEC					
1-GATE S	ORTS	511	ACT_ND	NUMBER	SPEC_A		A	CT_P	SORT	FREQ%	ACT_P	
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)	
				•	227			<b>/ 000</b>	E0	5.8%		
1	6	1.2%	-14000	0	-223			4000	58		4 8	
2	33	6.5%	-12000	1	-191			8000	450	45.3%	12	
3	54	10.6%	-10000	1	-159			2000	183	18.4%		
4	99	19.4%	-8000	2	-127			6000	88	8.9%	16 20	
5	117	22.9%	-6000	4	-95			0000	51	5.1%	20	
6	75	14.7%	-4000	23	-64			4000	33	3.3%	24	
7	97	19.0%	-2000	86	-32			8000	20	2.0%	28	
8	30	5.9%	0	230	0			2000	18	1.8%	32 36	
TOTAL	511		2000	430	32			6000	15	1.5%	30 40	
			4000	483	64			0000	16	1.6%	44	
2-GATE S		482	6000	337	95			4000	13 3	1.3%	44	
DETECTR	SORTS	FREQ%	8000	204	127			2000	3	0.3%	52	
8			10000	84	159			2000	4	0.4%	56	
9	20	4.1%	12000	29	191			6000	7		60	
10	45	9.3%	14000	13	223			0000 4000	2	0.2%	64	
11	62	12.9%	16000	2	254			8000	2	0.2%	68	
12	113	23.4%	18000	0	286			2000	3	0.3%	72	
13	92	19.1%	20000	0	318			6000	0	0.0%	76	
14	89	18.5%	22000	0	350 383			0000	3		80	
15	61	12.7%	24000	0	382				4	0.4%	84	
TOTAL	482		26000	0	413			4000	17		>84	
			>28000	0	0			4000		1.74	704	
SUMMARY	TOTALS		TOTAL	1929				OTAL	993			
		CLE EVENTS	1021		SORTS BY	ONE G	ATE ONLY		511			
-		ICLE EVENTS	337		SORTS BY	TWO G	ATES		482			
		ED EVENTS	66									

#### REC CODE EXPLANATION

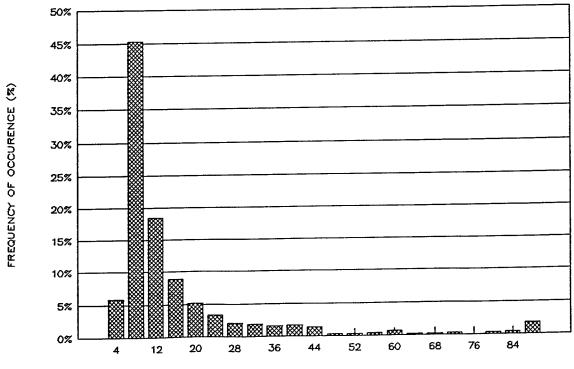
1.00 Source check (Soil on belt)

2.00 Empty belt

SORTER 1 LOG DATA FOR 12-May-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 12-May-93



ACTIVITY RANGES (kBq)

A-22

SORTER 2 12-	4ay-93									
AVERAGE BACKGROUND C	OUNT RATE		0.86	_		c/sec				
SORTER SOIL DENSITY				tons/m						
GROUND SOIL DENSITY			1.65	tons/m	•			CLEAN		
							INATED	119.9		
MASS TOTAL							tons	62.9		
MAXIMUM/SORT							kg	56.6		
MINIMUM/SORT						V.0	kg	50.0	<b>^</b> 9	
WEIGHT RECOVERY OR V	OLUME RECOVERY									99.2%
EQUIVALENT SOIL-IN-G	ROUND					0.72	yd <sup>3</sup>	95.0	Aq,	95.7 yd³/da
PARTICLE ACTIVITY (M	AYIMIM FSTIMATE)									
TOTAL						15,031	kBq			
MAXIMUM/SORT						•	kBq	•	•	
MINIMUM/SORT						3.0	kBq			
, in the state of									1.5	
DISPERSED + PARTICLE	(REALISTIC ESTI	MATE) ACTIV	ITY			5,045		4,741		
MAXIMUM/SORT							kBq		kBq	
MINIMUM/SORT							Bq		kBq	
SPECIFIC ACTI	VITY					5,565	i Bq/kg	40	Bq/kg	
WORK HISTORY										
WORK DAY STAR	τ	06:00 AM				WORK D	AY END	05:30 PM		
PLANT START-U	P	06:00 AM				PLANT	SHUT-DOWN	05:30 PM		
START SOIL PR	OCESSING	06:19 AM					IL PROCESSING			
LUNCH START		11:30 AM				LUNCH	PERIOD	0.0	hr	
WORK	HOURS						11.5 hr			
AVAI	LABLE HOURS						11.5 hr			
ACTU	AL PROCESS HOURS	(total 20-	sec r	ecords)			10.67 hr			
DOWN	-TIME						0.83 hr			
TOTA	L SYSTEM PAUSE						0.00 hr			
NONA	VAILABLE HOURS						0.0 hr			
STAR	T-UP						0.32 hr			
SHUT	-DOWN						0.52 hr			
PLAN	T PERFORMANCE						92.8%			
PROD	UCTIVITY						92.8%			
TOTAL SOIL PROCESSIN	G RECORDS (2-SEC	and 20-SEC	)				2,774			
NONPROCESS RECORDS (							9			
20-SEC PROCES						1,920	0			
TOTA	L SORT						0 MD>0 & MND=0			
NO S	ORT					-	5 AD=0 & MD=0			
SOME	SORT					56	5 AD>0&0 <md<mn< td=""><td>IDmax&amp;MND&lt;</td><td>INDmax</td><td></td></md<mn<>	IDmax&MND<	INDmax	
UNE)	PLAINED RECORDS					(	0			
O <al< td=""><td>&lt;1kBq &amp; MD&gt;0</td><td>0</td><td></td><td></td><td></td><td></td><td></td><td>UNEXPLAT</td><td>N</td><td>PAUSE</td></al<>	<1kBq & MD>0	0						UNEXPLAT	N	PAUSE
	AD=0 & MI	0						TIME		TIME
	AD<0 & MI	0						None		None
ACT	P <5 kBq	148	17.3	2						

19,200

2-	SEC COUNT	PERIODS				19,200		. 0 1:0~1			
	2-S	EC RECORDS	WITH SO	RTS				>0 kBq)			
	2-S	EC RECORDS	WITH POS	SITIVES	IN >1 DE	TECTOR					
		2	DETECTORS	S	166		86.0%				
			DETECTOR		25		13.0%				
			DETECTOR		2		1.0%				
			DETECTOR		0		0.0%				
			DETECTOR		0		0.0%				
			DETECTOR		0		0.0%				
			DETECTOR		0		0.0%				
			TAL			193					
	MCS	2-SEC REC		H SORTS		661					
	NC:	SEC PERIODS	LITH NO	SORTS		18,539	)				
	Z-:	S TIME BETV	JEEN 2-SE	C SORTS		58.1	sec				
	AVC	3 TIME DET	12211 2 0-					•			
		447	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
1-GATE S			(Bq)		(Bq/kg)			(Bq)	(#)		(kBq)
DETECTR	SORTS	FREQ%	(Pd)	<b>\"</b> "	(- <del>-</del>						
		7 /4	-14000	2	-223			4000	38	4.4%	4
1	15	3.4%	-12000	0	-191			8000	412	48.2%	8
2	71	15.9%	-10000	0	-159			12000	158	18.5%	12
3	78	17.4%	-8000	2	-127			16000	67	7.8%	16
4	105	23.5%	-6000	6	-95			20000	35	4.1%	20
5	88	19.7%	-4000	31	-64			24000	25	2.9%	24
6	63	14.1%	-2000	107				28000	19	2.2%	28
7	23	5.1%	-2000	294				32000	23	2.7%	32
8	4	0.9%	2000	445				36000	6	0.7%	36
TOTAL	447		4000	455				40000	7	0.8%	40
		.07	6000	335				44000	10	1.2%	44
2-GATE		407	8000	163				48000	9	1.1%	48
DETECTR	SORTS	FREQ%		67				52000	6	0.7%	52
8		0.49	10000 12000	17				56000	2	0.2%	56
9	37	9.1%		4	_			60000	4	0.5%	60
10	64	15.7%	14000 16000	1				64000	0	0.0%	64
11	81	19.9%						68000	2	0.2%	68
12	97	23.8%	18000	0				72000	2	0.2%	72
13	62	15.2%	20000	Ċ				76000	4	0.5%	76
14	54	13.3%	22000	(				80000	3	0.4%	80
15	12	2.9%	24000	(				84000	1	0.1%	84
TOTAL	407		26000			)		>84000	21	2.5%	>84
			>28000			•		TOTAL	854		
			TOTAL	1929	7						
	TOTALS				CODIC	RY ONE	GATE O	NLY	447		
	HOT PARTIC		880		SORTS				407		
	MULTIPARTI				30113	J. 180					
	DISTRIBUTE	D EVENTS	0								

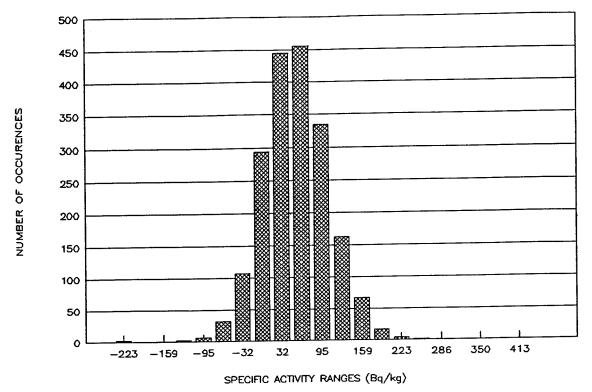
### REC CODE EXPLANATION

2-SEC COUNT PERIODS

1.00 Source check (Soil on belt)

2.00 Empty belt

SORTER 2 LOG DATA FOR 12-May-93



### JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 12-May-93 60% 50% FREQUENCY OF OCCURENCE (%) 40% 30% 20% 10% 0% 76 84 68 52 60 12 20 28 36

ACTIVITY RANGES (kBq)

A-25

SORTER 1 11-May-93				
AVERAGE BACKGROUND COUNT RATE	0.80 ± 0.03	c/sec		
SORTER SOIL DENSITY	1.35 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³			
drooms sore sense.		CONTAMINATED	CLEAN	
MASS TOTAL		1.70 tons	119.6 tons	
MAXIMUM/SORT		8.6 kg	62.9 kg	
MINIMUM/SORT		0.8 kg	54.2 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY				98.6%
EQUIVALENT SOIL-IN-GROUND		1.35 yd³	94.8 yd³	96.2 yd3/day
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)	•			
TOTAL		24,577 kBq		
MAXIMUM/SORT		449 kBq		
MINIMUM/SORT		2.9 kBq		
			0.705 1:0-	
DISPERSED + PARTICLE (REALISTIC ESTI	MATE) ACTIVITY	8,212 kBq	9,705 kBq	
MAXIMUM/SORT		229 kBq	21 kBq	
MINIMUM/SORT		0 Bq	-5 kBq	
SPECIFIC ACTIVITY		4,835 Bq/kg	81 Bq/kg	
~				
WORK HISTORY		LIGHT BAY SUB	05:30 PM	
WORK DAY START	06:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	06:00 AM	PLANT SHUT-DOWN		
START SOIL PROCESSING	06:18 AM	END SOIL PROCESSING	0.0 hr	
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 111	
		11.5 hr		
WORK HOURS		11.5 hr		
AVAILABLE HOURS		10.72 hr		
	S (total 20-sec records)	0.78 hr		
DOWN-TIME		0.00 hr		
TOTAL SYSTEM PAUSE		0.0 hr		
NONAVAILABLE HOURS		0.31 hr		
START-UP		0.48 hr		
SHUT-DOWN		93.2%		
PLANT PERFORMANCE		93.2%		
PRODUCTIVITY		<b>V</b>		
TOTAL SOIL PROCESSING RECORDS (2-SE	r and 20-SEC)	3,531		
NONPROCESS RECORDS (Test, calibration	on etc)	4		
20-SEC PROCESS RECORDS		1,929		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		1,011 AD=0 & MD=0	& MND>0	
SOME SORT		918 AD>0&0 <md<mn< td=""><td>Dmax&amp;MND<mndmax< td=""><td></td></mndmax<></td></md<mn<>	Dmax&MND <mndmax< td=""><td></td></mndmax<>	
UNEXPLAINED RECORDS		0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	5		UNEXPLAIN	PAUSE
AD=0 & M	_		TIME	TIME
AD<0 & M	_		07:07:01	None
ACT_P <5 kBq	326 20.3%		10:20:41	

:	2-SEC COUNT PERIODS				19,290					11:35:01		
		2-SEC RECORD	S WITH S	ORTS		1,602	(ACT_P	>0 kBq)		1-	4:28:01	
		2-SEC RECORD			IN >1 DE	TECTOR				1	5:12:21	
			DETECTO		291		82.7%					
		3	DETECTO	RS	51		14.5%					
		4	DETECTO	RS	9		2.6%					
		5	DETECTO	RS	1		0.3%					
		. 6	DETECTO	RS	0		0.0%					
		7	DETECTO	RS	0		0.0%					
		8	DETECTO	RS	0		0.0%					
		T	OTAL			352						
		NET 2-SEC RE	CORDS WI	TH SORTS		1,250						
		2-SEC PERIOD	S WITH N	O SORTS		18,040						
		AVG TIME BET	WEEN 2-S	EC SORTS		30.9	sec					
1-GATE	SORTS	809	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P	
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)	
1	18	2.2%	-14000	0	-223			4000	93	5.8%	4	
2	50	6.2%	-12000	0	-191			8000	720	44.9%	8	
3	97	12.0%	-10000	0	-159			12000	279	17.4%	12	
4	143	17.7%	-8000	2	-127			16000	162	10.1%	16	
5	181	22.4%	-6000	1	-95			20000	86	5.4%	20	
6	134	16.6%	-4000	6	-64			24000	60	3.7%	24	
7	143	17.7%	-2000	25	-32			28000	28	1.7%	28	
8	43	5.3%	0	106	0			32000	19	1.2%	32	
TOTAL	809		2000	250	32			36000	26	1.6%	36	
			4000	388	64			40000	17	1.1%	40	
2-GATE	SORTS	793	6000	452	95			44000	9	0.6%	44	
DETECTR	SORTS	FREQ%	8000	354	127			48000	12	0.7%	48	
8			10000	189	159			52000	14	0.9%	52	
9	36	4.5%	12000	82	191			56000	11	0.7%	56	
10	72	9.1%	14000	38	223			60000	14	0.9%	60	
11	123	15.5%	16000	23	254			64000	5	0.3%	64	
12	155	19.5%	18000	11	286			68000	5	0.3%	68	
13	163	20.6%	20000	3	318			72000	3	0.2%	72	
14	145	18.3%	22000	3	350			76000	3	0.2%	76	
15	99	12.5%	24000	0	382			80000	3	0.2%	80	
TOTAL	793		26000	0	413			84000	4	0.2%	84	
			>28000	0	0		>	84000	29	1.8%	>84	
			TOTAL	1933				TOTAL	1602		•	
SUMMARY	TOTALS											
1	HOT PART	ICLE EVENTS	1634		SORTS BY	ONE GA	ATE ONL	Y	809			
	MULTIPAR	TICLE EVENTS	509		SORTS BY	TWO G/	ATES		793			

#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

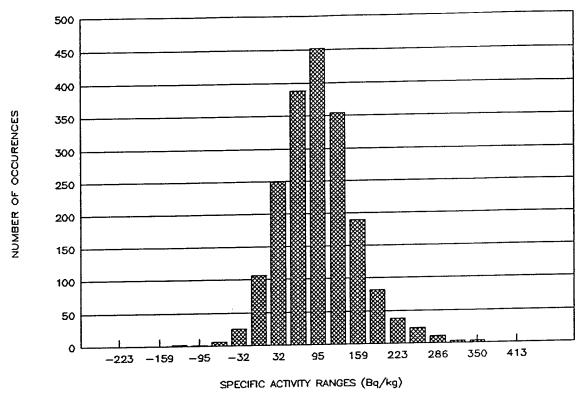
2.00 Empty belt

DISTRIBUTED EVENTS

3.00 Test (No process soil)

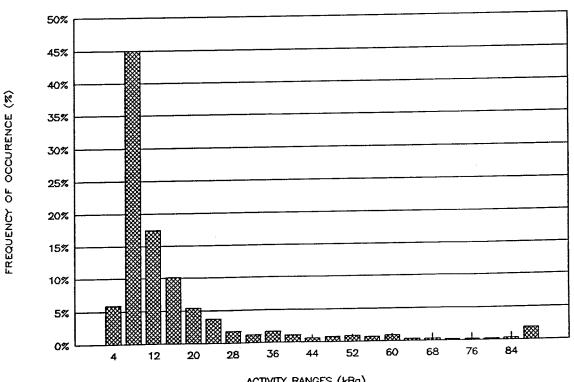
2

SORTER 1 LOG DATA FOR 11-May-93



### JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 11-May-93



ACTIVITY RANGES (kBq)

A-28

SORTER 2 11-May-93					•			
AVERAGE BACKGROUND COUNT R	ATE C	).88 ± 0.0	04 c/sec					
SORTER SOIL DENSITY		1.35 tons/m³						
GROUND SOIL DENSITY	1	1.65 tons/m³						
			CONTAMINATED	CLEAN				
MASS TOTAL			1.63 tons	119.5 tons				
MAXIMUM/SORT			7.1 kg	62.9 kg				
MINIMUM/SORT			0.8 kg	55.8 kg				
WEIGHT RECOVERY OR VOLUME	RECOVERY				98.7%			
EQUIVALENT SOIL-IN-GROUND			1.29 yd³	94.7 yd³	96.0 yd3/day			
PARTICLE ACTIVITY (MAXIMUM	I ESTIMATE)		T4 470 40					
TOTAL			31,638 kBq					
MAXIMUM/SORT			1,560 kBq					
MINIMUM/SORT			2.7 kBq					
DISPERSED + PARTICLE (REAL	TOTIC COTIMATEL ACTIVIT	TV	10,439 kBq	8,474 kBq				
	.13(16 E3) THATE ACTIVE	••	845 kBq	21 kBq				
MAXIMUM/SORT			0 Bq	-8 kBq	,			
MINIMUM/SORT			6,424 Bq/kg	71 Bq/k	g			
SPECIFIC ACTIVITY				•				
WORK HISTORY								
WORK DAY START	06:00 AM		WORK DAY END	05:30 PM				
PLANT START-UP	06:00 AM		PLANT SHUT-DOWN	05:30 PM				
START SOIL PROCESS	ING 06:18 AM		END SOIL PROCESSING	05:00 PM				
LUNCH START	11:30 AM		LUNCH PERIOD	0.0 hr				
	_		11.5 hr					
WORK HOURS			11.5 hr					
AVAILABLE		on manageds)	10.70 hr					
	OCESS HOURS (total 20-s	ec records)	0.80 hr					
DOWN-TIME			0.00 hr					
TOTAL SYSTEM PAUSE			0.0 hr					
NONAVAILA	BEE HOOKS		0.31 hr					
START-UP			0.50 hr					
SHUT-DOWN			93.0%					
PLANT PERFORMANCE			93.0%					
PRODUCTIV	ITY		73.0%					
TOTAL SOIL PROCESSING REC	ORDS (2-SEC and 20-SEC)		3,454					
NONPROCESS RECORDS (Test,	7							
20-SEC PROCESS RECORDS			1,926					
TOTAL SORT			0 MD>0 & MND=0					
NO SORT			1,043 AD=0 & MD=0 & MND>0					
SOME SORT			883 AD>0&0 <md<mndmax&mnd<mndmax< td=""></md<mndmax&mnd<mndmax<>					
	ED RECORDS		0					
0 <ad<1kbq< td=""><td>_</td><td></td><td></td><td>UNEXPLAIN</td><td>PAUSE</td></ad<1kbq<>	_			UNEXPLAIN	PAUSE			
0 4m 11004	AD=0 & MD 0			TIME	TIME			
	AD<0 & MD 0			10:55:41	None			
ACT_P <5		15.7%		11:15:21				
VOI_L A		•						

1,528 (ACT\_P >0 kBq)

19,260

		2	DETECTO	RS	300		85.0%				
		3	DETECTO	RS	48		13.6%				
4 DETECTORS				5		1.4%					
5 DETECTORS				0		0.0%					
	6 DETECTORS				0		0.0%				
	7 DETECTORS						0.0%				
	8 DETECTORS						0.0%				
	TOTAL					353	3				
	NET 2-SEC RECORDS WITH SORTS					1,17	5				
	2-SEC PERIODS WITH NO SORTS				18,08	5					
AVG TIME BETWEEN 2-SEC SORTS				32.8	B sec						
1-GATE	SORTS	794	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	_ (Bq)	(#)	(Bq/kg)			(pg)	(#)		(kBq)
DETECTION	•		·								
1	43	5.4%	-14000	2	-223			4000	54	3.5%	4
2	114	14.4%	-12000	2	-191			8000	728	47.6%	8
3	138	17.4%	-10000	0	-159			12000	271	17.7%	12
4	137		-8000	2	-127			16000	136	8.9%	16
5	157		-6000	4	-95			20000	73	4.8%	20
6	126	15.9%	-4000	8	-64			24000	45	2.9%	24
7	65	8.2%	-2000	34	-32			28000	34	2.2%	28
8	14	1.8%	0	146	0			32000	26	1.7%	32
TOTAL	794		2000	288	32			36000	15	1.0%	36
101111	•••		4000	450	64			40000	12	0.8%	40
2-GATE	SORTS	734	6000	426	95			44000	17	1.1%	44
DETECTR	SORTS	FREQ%	8000	302	127			48000	9	0.6%	48
8			10000	143	159			52000	10	0.7%	52
9	88	12.0%	12000	62	191			56000	1	0.1%	56
10	92		14000	37	223			60000	8	0.5%	60
11	147		16000	15	254			64000	5	0.3%	64
12	145		18000	9	286			68000	6	0.4%	68
13	137	18.7%	20000	1	318			72000	8	0.5%	72
14	80		22000	2	350			76000	6	0.4%	76
15	45		24000	0	382			80000	6	0.4%	80
TOTAL	734		26000	0	413			84000	4	0.3%	84
			>28000	0	0			>84000	54	3.5%	>84
			TOTAL	1933				TOTAL	1528		
SUMMARY	TOTALS										
HOT PARTICLE EVENTS		1556		SORTS BY			LY	794			
MULTIPARTICLE EVENTS		494		SORTS BY	Y TWO	GATES		734			
DISTRIBUTED EVENTS		0									

### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

2.00 Empty belt

2-SEC COUNT PERIODS

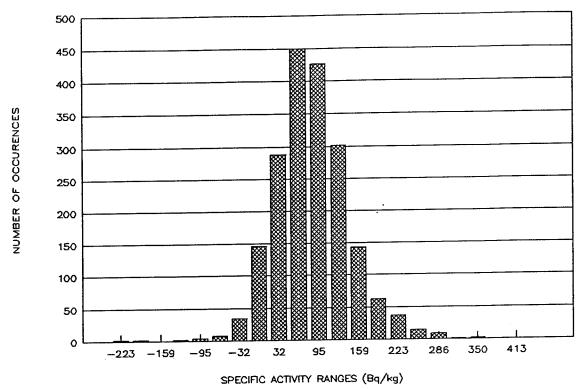
2-SEC RECORDS WITH SORTS

2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR

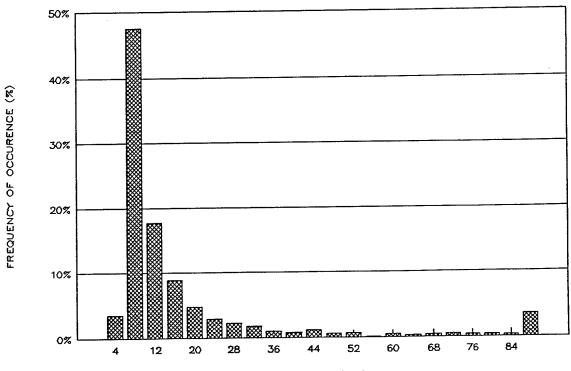
3.00 Test (No process soil)

2

SORTER 2 LOG DATA FOR 11-May-93



JA SOIL CLEANUP PLANT HOT PARTICLES
SORTER 2 LOG DATA FOR 11-May-93



ACTIVITY RANGES (kBq)

SORTER 1 10-May-93				
AVERAGE BACKGROUND COUNT RATE	0.80 ± 0.	02 c/sec		
SORTER SOIL DENSITY	1.35 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m <sup>3</sup>			
		CONTAMINATED	CLEAN	
MASS TOTAL		1.55 tons	119.6 tons	
MAXIMUM/SORT		10.2 kg	62.9 kg	
MINIMUM/SORT		0.8 kg	52.7 kg	
				98.7%
WEIGHT RECOVERY OR VOLUME RECOVERY	1	1.23 yd³	94.8 yd3	96.0 yd3/day
EQUIVALENT SOIL-IN-GROUND		1.23 yu	,,,,,,,	,
				·
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	(E)	27,150 kBq		
TOTAL	. •	800 kBq		
MAXIMUM/SORT		3.1 kBq		
MINIMUM/SORT		••••		
DISPERSED + PARTICLE (REALISTIC ES	STIMATE) ACTIVITY	8,850 kBq	9,446 kBq	
	STIRMLEY NOTITION	512 kBq	22 kBq	
MAXIMUM/SORT		0 Bq	-11 kBq	
MINIMUM/SORT SPECIFIC ACTIVITY		5,707 Bq/kg	79 Bq/k	g
SPECIFIC ACTIVITY				
WORK HISTORY				
WORK DAY START	06:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	06:00 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:16 AM	END SOIL PROCESSING	0.0 hr	
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 111	
		11.5 hr		
WORK HOURS		11.5 hr		
AVAILABLE HOURS	URS (total 20-sec records)	10.70 hr		
	ors (total 20 see . cos. co,	0.80 hr		
DOWN-TIME Total System Paus	=	0.00 hr		
NONAVAILABLE HOUR		0.0 hr		
START-UP	•	0.27 hr		
SHUT-DOWN		0.53 hr		
PLANT PERFORMANCE		93.0%		
PRODUCTIVITY		93.0%		
TOTAL SOIL PROCESSING RECORDS (2-	SEC and 20-SEC)	3,391		
NONPROCESS RECORDS (Test, calibra	tion, etc)	3		
20-SEC PROCESS RECORDS		1,926		
TOTAL SORT		0=0MM & 0<0M 0		
NO SORT		1,068 AD=0 & MD=0   858 AD>0&0 <md<mn< td=""><td></td><td>•</td></md<mn<>		•
SOME SORT			DING VOLUME ALMONING V	•
UNEXPLAINED RECOR		0	UNEXPLAIN	PAUSE
0 <ad<1kbq &="" md="">0</ad<1kbq>	1		TIME	TIME
AD=0 &	_		14:51:29	None
AD<0 &				
ACT_P <5 kBq	300 20.5%			

2-SEC COUNT PERIODS	19,	260
2-SEC RECORDS WITH SORTS	1,	465 (ACT_P >0 kBq)
2-SEC RECORDS WITH POSITIVES	IN >1 DETEC	CTOR
2 DETECTORS	305	79.6%
3 DETECTORS	62	16.2%
4 DETECTORS	13	3.4%
5 DETECTORS	3	0.8%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL		383
NET 2-SEC RECORDS WITH SORTS	1,	,082
2-SEC PERIODS WITH NO SORTS	18,	, 178
AVG TIME BETWEEN 2-SEC SORTS	3	55.6 sec

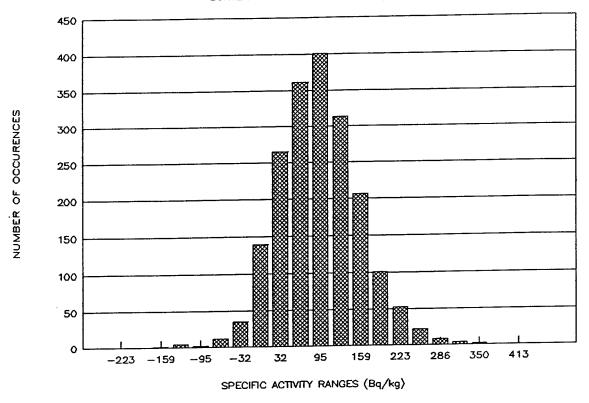
1-GATE S	ORTS	749	ACT_ND	NUMBER	SPEC_A	ACT_P		FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
							_		,
1	20	2.7%	-14000	0	-223	4000	75	5.1%	4
2	60	8.0%	-12000	0	-191	8000	651	44.4%	8
3	81	10.8%	-10000	1	-159	12000	261	17.8%	12
4	123	16.4%	-8000	4	-127	16000	122	8.3%	16
5	150	20.0%	-6000	2	-95	20000	83	5.7%	20
6	138	18.4%	-4000	11	-64	24000	46	3.1%	24
7	138	18.4%	-2000	35	-32	28000	33	2.3%	28
8	39	5.2%	0	140	0	32000	24	1.6%	32
TOTAL	749		2000	265	32	36000	22	1.5%	36
			4000	362	64	40000	8	0.5%	40
2-GATE S	ORTS	716	6000	401	95	44000	18	1.2%	44
DETECTR	SORTS	FREQ%	8000	313	127	48000	16	1.1%	48
8			10000	206	159	52000	12	0.8%	52
9	39	5.4%	12000	101	191	56000	4	0.3%	56
10	73	10.2%	14000	53	223	60000	6	0.4%	60
11	106	14.8%	16000	22	254	64000	5	0.3%	64
12	129	18.0%	18000	8	286	68000	5	0.3%	68
13	149	20.8%	20000	3	318	72000	8	0.5%	72
14	133	18.6%	22000	2	350	76000	6	0.4%	76
15	87	12.2%	24000	0	382	80000	5	0.3%	80
TOTAL	716		26000	0	413	84000	5	0.3%	84
••••			>28000	0	0	>84000	50	3.4%	>84
			TOTAL	1929	i	TOTAL	1465		
SUMMARY	Z IATOT								
		LE EVENTS	1484		SORTS BY	ONE GATE ONLY	749		
		CLE EVENTS	471		SORTS BY	TWO GATES	716		
-	ISTRIBUTE		0						
U	TALKTOOLE	D LTCAID	•						

#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

2.00 Empty belt

SORTER 1 LOG DATA FOR 10-May-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 10-May-93

50% 45% 40% FREQUENCY OF OCCURENCE (%) 35% 30% 25% 20% 15% 10% 5% 0% 68 76 84 52 28 36 12 20

ACTIVITY RANGES (kBq)

A-34

SORTER 2 10-May-93									
AVERAGE BACKGROUND COUNT RATE		0.87	±	0.04	c/sec				
SORTER SOIL DENSITY		1.35	tons/m	13					
GROUND SOIL DENSITY		1.65	tons/m	3					
					CONTAM	INATED	CLEAN		
MASS TOTAL					1.69	tons	118.4	tons	
MAXIMUM/SORT					7.9	kg	62.9	kg	
MINIMUM/SORT					8.0	kg	55	kg	
WEIGHT RECOVERY OR VOLUME RECOVE	ERY								98.6%
EQUIVALENT SOIL-IN-GROUND					1.34	yd <sup>3</sup>	93.8	yd3	95.2 yd <sup>3</sup> /day
PARTICLE ACTIVITY (MAXIMUM ESTI	(ATE)								
TOTAL					29,040	•			
MAXIMUM/SORT					1,937	•			
MINIMUM/SORT					2.6	kBq			
DISPERSED + PARTICLE (REALISTIC	ESTIMATE) ACTIV	'ITY			9,640	kBq	8,708	•	
MAXIMUM/SORT					1049	kBq		kBq	
MINIMUM/SORT						Bq		kBq	
SPECIFIC ACTIVITY					5,703	Bq/kg	74	8q/kg	
WORK HISTORY									
WORK DAY START	06:00 AM				WORK D	AY END	05:30 PM		
PLANT START-UP	MA 00:60					SHUT-DOWN	05:30 PM		
START SOIL PROCESSING	06:19 AM					IL PROCESSING			
LUNCH START	11:30 AM				LUNCH 1	PERIOD	0.0	hr	
WORK HOURS						11.5 hr			
AVAILABLE HOURS						11.5 hr			
ACTUAL PROCESS I	HOURS (total 20-	sec re	cords)			10.61 hr			
DOWN-TIME						0.89 hr			
TOTAL SYSTEM PAI						0.00 hr			
NONAVAILABLE HO	JRS					0.0 hr			
START-UP						0.33 hr			
SHUT-DOWN						0.57 hr			
PLANT PERFORMANO PRODUCTIVITY	CE					92.2% 92.2%			
TOTAL SOIL PROCESSING RECORDS (2	2-eec and 20-eec	· <b>`</b>				3,501			
NONPROCESS RECORDS (Test, calib		•				14			
20-SEC PROCESS RECORDS	acton, etc,				1,909				
TOTAL SORT						MD>0 & MND=0			
NO SORT						AD=0 & MD=0	R MND>0		
SOME SORT					-	AD>0&0 <md<mni< td=""><td></td><td>NDmax</td><td></td></md<mni<>		NDmax	
UNEXPLAINED RECO	ORDS				0				
0 <ad<1kbq &="" md="">0</ad<1kbq>							UNEXPLAI	N I	PAUSE
•	& MD 0						TIME		TIME
AD<0							06:59:50	1	None

19,090

14:26:50

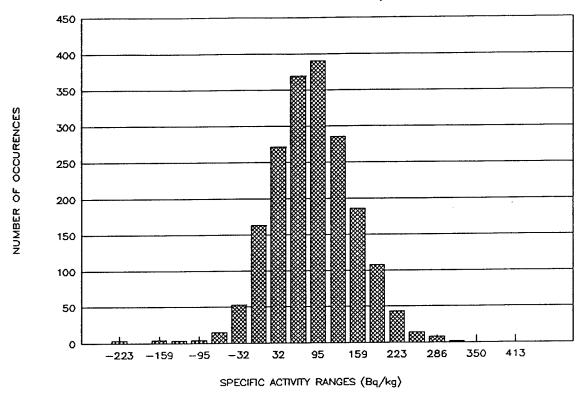
2	2-SEC COUNT PERIODS					19,090					4:20:30
	2	-SEC RECORD	S WITH SO	ORTS		1,592	(ACT_P	>0 kBq)	•	1	4:36:30
	2	2-SEC RECORD	S WITH PO	OSITIVES	IN >1 DE	TECTOR					
			DETECTO		334		83.7%				
		3	DETECTO	RS	59		14.8%				
			DETECTO		5		1.3%				
		5	DETECTO	RS	1		0.3%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
			OTAL			399					
		TET 2-SEC RE		ZI SORTS		1,193					
		161 2-36C RE 2-SEC PERIOD				17,897					
	_	LVG TIME BET				32.0					
	,	AVG IIME BEI	MEEN 2-3	EC SORIS		52.10	-				
		024	ACT NO	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
1-GATE S		821	ACT_ND		(Bq/kg)			(Bq)	(#)		(kBq)
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bd) kg)			(-4)	•		
	14	5.6%	-14000	3	-223		-	4000	56	3.5%	4
1	46	14.7%	-12000	0	-191			8000	748	47.0%	8
2	121		-10000	4	-159			12000	287	18.0%	12
3	134	16.3%		3	-127			16000	127	8.0%	16
4	149	18.1%	-8000	4	-95			20000	89	5.6%	20
5	168	20.5%	-6000		-64			24000	47	3.0%	24
6	112	13.6%	-4000	15				28000	36	2.3%	28
7	75	9.1%	-2000	53	-32			32000	46	2.9%	32
8	16	1.9%	0	163	0			36000	22	1.4%	36
TOTAL	821		2000	271	32				14	0.9%	40
			4000	370	64			40000	12	0.8%	44
2-GATE S	ORTS	771	6000	391	95			44000	16	1.0%	48
DETECTR	SORTS	FREQ%	8000	285	127			48000	11	0.7%	52
8			10000	186	159			52000			56
9	71	9.2%	12000	108	191			56000	4	0.3%	60
10	110	14.3%	14000	43	223			60000	11	0.7%	64
11	142	18.4%	16000	14	254			64000	5	0.3%	68
12	169	21.9%	18000	8	286			68000	6	0.4%	
13	143	18.5%	20000	2	318			72000	4	0.3%	72
14	105	13.6%	22000	0	350			76000	8	0.5%	76
15	31	4.0%	24000	0	382			80000	2	0.1%	80
TOTAL	771		26000	0	413			84000	6		84
			>28000	0	0		>	84000	35		>84
			TOTAL	1923				TOTAL	1592		
SUMMARY	TOTALS										
		CLE EVENTS	1620		SORTS BY	ONE G	ATE ONL	.Υ	821		
		ICLE EVENTS	512		SORTS BY	TWO G	ATES		771		
		ED EVENTS	0								
· ·											

#### REC CODE EXPLANATION

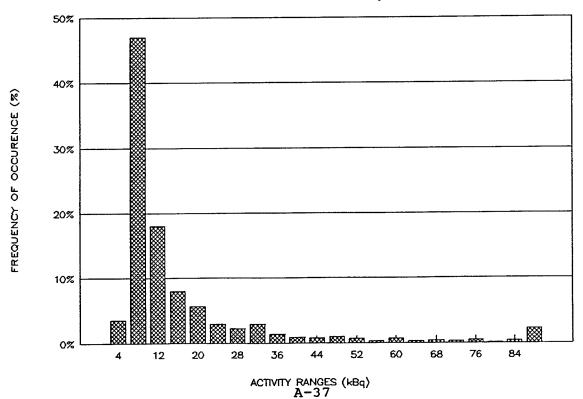
1.00 Source check (Soil on belt)

2.00 Empty belt

SORTER 2 LOG DATA FOR 10-May-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 10-May-93



SORTER 1 08-May-93									
AVERAGE BACKGROUND COUNT RATE		0.79	±	0.04	c/sec				
SORTER SOIL DENSITY		1.35	tons/	N <sup>3</sup>					
GROUND SOIL DENSITY		1.65	tons/	U <sub>2</sub>			CLEAN		
					CONTAM		36.3	tone	
MASS TOTAL						tons	62.9		
MAXIMUM/SORT					7.1	_	55.8		
MINIMUM/SORT					0.8	kg	0.00	<b>~</b> 9	
									98.8%
WEIGHT RECOVERY OR VOLUME RECOVERY					0.34	ved3	28.8	vd³	29.1 yd3/day
EQUIVALENT SOIL-IN-GROUND					0.34	yu	2010		- •
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	)				6,409	k8a			
TOTAL					•	kBq			•
MAXIMUM/SORT						kBq			
MINIMUM/SORT					J.,				
	······································	11 TV			2,112	kBa	2,699	kBq	
DISPERSED + PARTICLE (REALISTIC EST	IMAIE) ACITA	111			-	kBq	17	kBq	
MAXIMUM/SORT						Bq .	-8	kBq	
MINIMUM/SORT						Bq/kg	74	Bq/kg	
SPECIFIC ACTIVITY					•	• •			
WORK HISTORY									
WORK DAY START	06:00 AM					AY END	10:09 AM		
PLANT START-UP	06:00 AM					SHUT-DOWN	10:09 AM		
START SOIL PROCESSING	06:32 AM					OIL PROCESSING		hr	
LUNCH START	11:30 AM				LUNCH	PERIOD	0.0	' '''	
						4.2 hr			
WORK HOURS						4.2 hr			
AVAILABLE HOURS			nacards			3.24 hr			
ACTUAL PROCESS HOUR	S (total 20	-sec i	ecoi as	• •		0.91 hr			
DOWN-TIME						0.00 hr			
TOTAL SYSTEM PAUSE						0.0 hr			
NONAVAILABLE HOURS						0.55 hr			
START-UP						0.32 hr			
SHUT-DOWN						78.2%			
PLANT PERFORMANCE PRODUCTIVITY						78.2%			
PRODUCTIVIT									
TOTAL SOIL PROCESSING RECORDS (2-SE	C and 20-SE	C)				984			
NONPROCESS RECORDS (Test, calibrati	ion, etc)					13			
20-SEC PROCESS RECORDS					58				
TOTAL SORT						0 MD>0 & MND=0			
NO SORT			1			9 AD=0 & MD=0		MIND	
SOME SORT						5 AD>0&0 <md<mn< td=""><td>PUMM&amp;XSmu</td><td>XSIIIUNN</td><td></td></md<mn<>	PUMM&XSmu	XSIIIUNN	
UNEXPLAINED RECORDS	S					0	INICYO! A	TAI	PAUSE
0 <ad<1kbq &="" md="">0</ad<1kbq>	1						UNEXPLA TIME	T M	TIME
AD=0 & 1	MD 0						09:43:4	4	None
AD<0 & 0							Q7:43:4	7	
ACT_P <5 kBq	74	18.	.5%						

5,840

	-SEC CO	UNI PERIOUS				3,040				
		2-SEC RECORD	S WITH S	ORTS		400 (	ACT_P >0 kBq	()		
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR				
		2	DETECTO	RS	84	8	6.6%			
		3	DETECTO	RS	11		1.3%			
		4	DETECTO	RS	2		2.1%			
		5	DETECTO	RS	0		0.0%			
		6	DETECTO	RS	0		0.0%			
		7	DETECTO	RS	0		0.0%			
		. 8	DETECTO	RS	0		0.0%			
		T	OTAL			97				
		NET 2-SEC RE	CORDS WI	TH SORTS		303				
		2-SEC PERIOD	S WITH N	O SORTS		5,537				
		AVG TIME BET	WEEN 2-S	EC SORTS		38.5 s	ec			
									•	
1-GATE S	ORTS	194	ACT_ND		SPEC_A		ACT_P		FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(Bq)	(#)		(kBq)
_	_	4 00	4.000	-	227		/000	18	4.5%	4
1	2		-14000	3	-223		4000			8
2	12		-12000	2			8000	192 62		12
3	28		-10000	1	-159		12000	35		16
4	35	18.0%	-8000	1	-127		16000		8.8%	20
5	45	23.2%	-6000	3	-95		20000	20	5.0%	24
6	34	17.5%	-4000	5	-64		24000	17		24 28
7	31	16.0%	-2000	13	-32		28000	13 8	3.3%	20 32
8	7	3.6%	0	35	0		32000	5	2.0% 1.3%	36
TOTAL	194		2000	96	32		36000 40000	3	0.8%	40
2 0475 0	ODTO	204	4000 6000	138 108	64 95		44000	3		44
2-GATE S	SORTS	206 FREQ%	8000	84	127		48000	6	1.5%	48
DETECTA 8	SURTS	FREGA	10000	52	159		52000	3		52
9	8	3.9%	12000	32	191		56000	0	0.0%	56
10	16	7.8%	14000	12	223		60000	1	0.3%	60
11	38	18.4%	16000	10	254		64000	0	0.0%	64
12	40	19.4%	18000	2	286		68000	1	0.3%	68
13	43	20.9%	20000	0	318		72000	2	0.5%	72
14	42	20.4%	22000	0	350		76000	0	0.0%	76
15	19	9.2%	24000	0	382		80000	1	0.3%	80
TOTAL	206	7.LX	26000	ő	413		84000	0	0.0%	84
TOTAL	200		>28000	0	0		>84000	10	2.5%	>84
			TOTAL	597	J		TOTAL	400		
SUMMARY	TOTALS		TOTAL							
		ICLE EVENTS	415		SORTS BY	ONE GAT	E ONLY	194		
		TICLE EVENTS	120			TWO GAT		206		
			-							

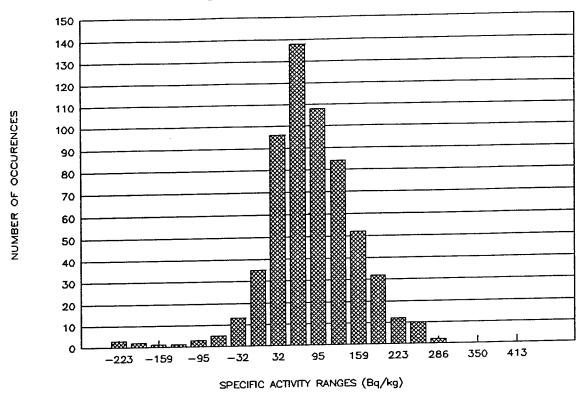
#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt

DISTRIBUTED EVENTS 0

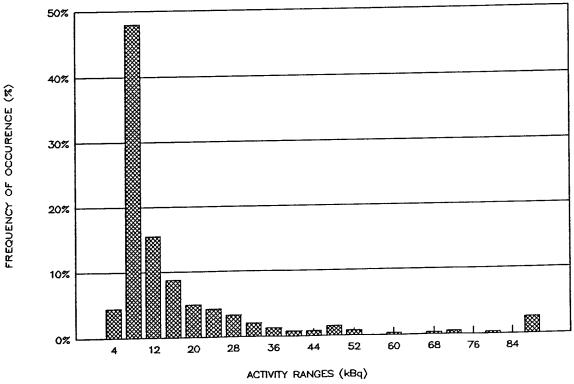
2-SEC COUNT PERIODS

SORTER 1 LOG DATA FOR 08-May-93



# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 08-May-93



A-40

SORTER 2 08-May-93						
AVERAGE BACKGROUND COUNT RATE		0.83	_	0.06 c/sec		
SORTER SOIL DENSITY		1.35 to	-			
GROUND SOIL DENSITY		1.65 to	ons/m			
				CONTAMINATED	CLEAN	
MASS TOTAL				0.36 tons	36.4 to	
MAXIMUM/SORT				4.7 kg	62.9 kg	
MINIMUM/SORT				0.8 kg	58.2 kg	ı
WEIGHT RECOVERY OR VOLUME RECOVE	RY					99.0%
EQUIVALENT SOIL-IN-GROUND				0.28 yd³	28.8 yd	3 29.1 yd3/day
PARTICLE ACTIVITY (MAXIMUM ESTIM	ATE)					
TOTAL				4,291 kBq		
MAXIMUM/SORT	•			215 kBq		
MINIMUM/SORT				3.0 kBq		
DISPERSED + PARTICLE (REALISTIC	ESTIMATE) ACTIVI	TY		1,548 kBq	2,734 kB	a
MAXIMUM/SORT	cornance, norrer	•		123 kBq	20 kB	•
MINIMUM/SORT				0 Bq	-6 kB	
SPECIFIC ACTIVITY				4,314 Bq/kg	75 Bq	•
HOOK HIGTORY						
WORK HISTORY	06:00 AM			WORK DAY END	05:30 PM	
WORK DAY START PLANT START-UP	06:00 AM			PLANT SHUT-DOWN	10:09 AM	
START SOIL PROCESSING	06:32 AM			END SOIL PROCESSI		
LUNCH START	11:30 AM			LUNCH PERIOD	0.5 hr	
				44.0.1		
WORK HOURS				11.0 hr		
AVAILABLE HOURS	ouno (6-4-1 30 -			4.2 hr		
ACTUAL PROCESS H	UUKS (TOTAL ZU-S	ec reco	oras)	3.24 hr		
DOWN-TIME TOTAL SYSTEM PAU	er.			0.91 hr 0.00 hr		
NONAVAILABLE HOU				6.9 hr		
START-UP	KS			0.55 hr		
SHUT-DOWN				0.31 hr		
PLANT PERFORMANCE	F			78.2%		
PRODUCTIVITY	-			29.5%		
TOTAL COLL PROCECULAR PECONDO /2	ere 30 eres			915		
TOTAL SOIL PROCESSING RECORDS (2: NONPROCESS RECORDS (Test, calibration)				13		
20-SEC PROCESS RECORDS	acton, etc,			584		
TOTAL SORT				0 MD>0 & MND:	=0	
NO SORT				364 AD=0 & MD=0		
SOME SORT				220 AD>0&0 <md<< td=""><td></td><td>ax</td></md<<>		ax
UNEXPLAINED RECO	RDS			0		•
0 <ad<1kbq &="" md="">0</ad<1kbq>				-	UNEXPLAIN	PAUSE
AD=0 &					TIME	TIME
AD<0 8					07:40:05	None
ACT_P <5 k8q		16.9%				

5,840

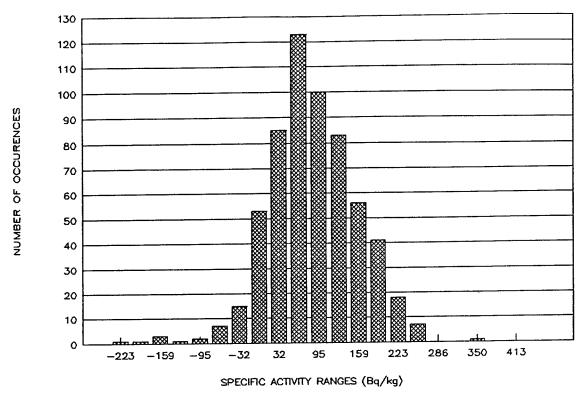
	2-SEC CO	UNT PERIODS				5,840					
		2-SEC RECORD					ACT_P	>0 kBq)			
		2-SEC RECORD	S WITH P	OSITIVES							
		2	DETECTO	RS	64		1.4%				
		3	DETECTO	RS	6		8.6%				
		4	DETECTO	RS	0		0.0%				
		5	DETECTO	RS	0		0.0%				
		6	DETECTO	RS	0		0.0%				
		7	DETECTO	RS	0		0.0%				
		8	DETECTO	RS	0		0.0%				
		τ	OTAL			70					
		NET 2-SEC RE	CORDS WI	TH SORTS		261					
		2-SEC PERIOD	S WITH N	O SORTS		5,579					
		AVG TIME BET	WEEN 2-S	EC SORTS		44.8 s	sec				
									CODT	EDE0*	ACT_P
1-GATE	SORTS	185	ACT_ND		SPEC_A			CT_P		FREQ%	(kBq)
DETECT	R SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kbq)
		, 70	-14000	1	-223			4000	15	4.5%	4
1	8			1	-191			8000	163	49.2%	8
2			-12000	3	-159			2000	60	18.1%	12
3			-10000	1	-127			6000	32	9.7%	16
4	40		-8000	2	-95			0000	20	6.0%	20
5	39		-6000	7	-64			4000	6	1.8%	24
6			-4000	15	-32			8000	6	1.8%	28
7			-2000	53	0			2000	7	2.1%	32
8			2000	85	32			6000	5	1.5%	36
TOTAL	185		2000	123	64			0000	2	0.6%	40
		4//	4000	100	95			4000	5	1.5%	44
2-GATE		146	6000	83	127			8000	0	0.0%	48
DETECT		FREQ%	8000 10000	56	159			2000	0	0.0%	52
8			12000	41	191			6000	1	0.3%	56
9			14000	18	223			0000	0	0.0%	60
10			16000	7	254			4000	2	0.6%	64
11			18000	0	286			8000	0	0.0%	68
12			20000	0	318			2000	0	0.0%	72
13			22000	1	350			6000	1	0.3%	76
14			24000	0	382			0000	0	0.0%	80
15			26000	0				4000	3	0.9%	84
TOTAL	146	1	>28000	0				4000	3	0.9%	>84
			TOTAL	597	_			OTAL	331		
CI MATY D	Y TOTALS		IOIAC	271			·				
JUNINK		ICLE EVENTS	337		SORTS BY	ONE GAT	TE ONLY		185		
		TICLE EVENTS	114		SORTS BY	TWO GAT	TES		146		
		TED EVENTS	0								
	J.J.M.50		•								

#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt

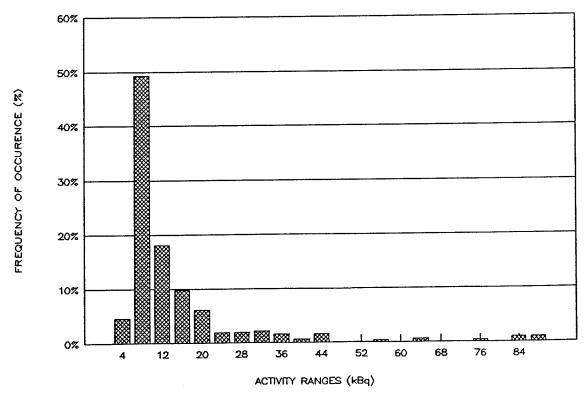
2-SEC COUNT PERIODS

SORTER 2 LOG DATA FOR 08-May-93



# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 08-May-93



A-43

SORTER 1 08-May-93									
AVERAGE BACKGROUND COUNT RATE	0.	80	±	ERR	c/sec				
SORTER SOIL DENSITY	1.	35	tons/m³						
GROUND SOIL DENSITY	1.	65	tons/m³				A. 5111		
GROOM COLO CAMPA					CONTAM	INATED	CLEAN		
MASS TOTAL						tons		tons	
MAXIMUM/SORT					6.3	-	62.9	-	
MINIMUM/SORT					0.8	kg	56.6	kg	
									98.8%
WEIGHT RECOVERY OR VOLUME RECOVERY							20.5	v43	20.8 yd3/day
EQUIVALENT SOIL-IN-GROUND					0.25	Aq,	20.5	yu	20.0 /4 /44/
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	)								
TOTAL					7,278				
MAXIMUM/SORT						kBq			
MINIMUM/SORT					2.8	kBq			
							2 172	LDa.	
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTIVITY	Y			2,115		2,172		
MAXIMUM/SORT						kBq		kBq	
MINIMUM/SORT						Bq		kBq	
SPECIFIC ACTIVITY					6,591	Bq/kg	04	Bq/kg	
WORK HISTORY							05:30 PM		
WORK DAY START	10:09 AM					AY END	02:35 PM		
PLANT START-UP	10:09 AM					SHUT-DOWN	02:33 PM		
START SOIL PROCESSING	11:39 AM					IL PROCESSING	0.5		
LUNCH START	11:30 AM				LUNCH	PERIOD	0.5	***	
						6.9 hr			
WORK HOURS						3.9 hr			
AVAILABLE HOURS						2.32 hr			
ACTUAL PROCESS HOUR	S (total 20-se	C	ecoras)			1.62 hr			
DOWN-TIME						0.00 hr			
TOTAL SYSTEM PAUSE						2.9 hr			
NONAVAILABLE HOURS						1.50 hr			
START-UP						0.62 hr			
SHUT-DOWN						58.9%			
PLANT PERFORMANCE						33.8%			
PRODUCTIVITY						33.04			
						719			
TOTAL SOIL PROCESSING RECORDS (2-SI	C and 20-SEC)					3			
NONPROCESS RECORDS (Test, calibrat	ion, etc)				41	_			
20-SEC PROCESS RECORDS						0 MD>0 & MND=0			
TOTAL SORT						5 AD=0 & MD=0			
NO SORT					17	2 AD>0&0 <md<mn< td=""><td>Dmax&amp;MND⊲</td><td>MNDmax</td><td></td></md<mn<>	Dmax&MND⊲	MNDmax	
SOME SORT	_					0			
UNEXPLAINED RECORDS						-	UNEXPLA	IN	PAUSE
0 <ad<1kbq &="" md="">0</ad<1kbq>	1 40 0						TIME		TIME
AD=0 & 1	_						12:39:2	8	None
AD<0 & (		19.	2%						
ACT_P <5 kBq	٠		<del></del>						

Printed on 05/18/93 at 11:59:48 AM

2-	SEC COUN	IT PERIODS				4,170					
~		2-SEC RECORDS	S WITH SO	ORTS			(ACT_P	>0 kBq)			
		2-SEC RECORDS			IN >1 DET		_				
			DETECTOR		58		80.6%				
			DETECTOR		12	•	16.7%				
			DETECTOR		2		2.8%				
			DETECTOR		0		0.0%				
			DETECTOR		0		0.0%				
			DETECTOR		0		0.0%				
			DETECTOR		0		0.0%				
			OTAL			72					
		NET 2-SEC RE		TH SORTS		230					
		2-SEC PERIOD				3,940					
	7	AVG TIME BET				36.3	sec				
	•	AND TIME DET	<b>ACCII C 0</b> .								
1-GATE SO	ORTS	147	ACT_ND	NUMBER	SPEC_A			CT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)		(Bq/kg)			(Bq)	(#)		(kBq)
02.120	••••		- •		-						
1	4	2.7%	-14000	0	-223			4000	15	5.0%	4
2	11	7.5%	-12000	0	-191			8000	141	46.7%	8
3	16	10.9%	-10000	1	-159		1	2000	53	17.5%	12
4	32	21.8%	-8000	0	-127		1	6000	25	8.3%	16
5	32	21.8%	-6000	2	-95		2	20000	11	3.6%	20
6	22	15.0%	-4000	0	-64		2	4000	12	4.0%	24
7	22	15.0%	-2000	8	-32		2	28000	11	3.6%	28
8	8	5.4%	0	21	0		3	2000	3	1.0%	32
TOTAL	147		2000	54	32		3	6000	4	1.3%	36
			4000	70	64		4	0000	2	0.7%	40
2-GATE S	ORTS	155	6000	87	95		4	4000	2	0.7%	44
DETECTR	SORTS	FREQ%	8000	81	127		4	8000	2	0.7%	48
8			10000	59	159	,		2000	3	1.0%	52
9	8	5.2%	12000	27	191		:	6000	4	1.3%	56
10	17	11.0%	14000	8	223			50000	1	0.3%	60
11	27	17.4%	16000	2	254			54000	1	0.3%	64
12	30	19.4%	18000	0	286			58000	1	0.3%	68
13	32	20.6%	20000	0	318		7	72000	1	0.3%	72
14	22	14.2%	22000	0	350		7	76000	0	0.0%	76
15	19	12.3%	24000	0	382		1	30000	0	0.0%	80
TOTAL	155		26000	0	413		ŧ	34000	0	0.0%	84
			>28000	0	0		>	34000	10	3.3%	>84
			TOTAL	420			•	TOTAL	302		
SUMMARY	TOTALS										
		CLE EVENTS	322		SORTS BY	ONE GA	TE ONL	Y	147		
м	ULTIPART	ICLE EVENTS	83		SORTS BY	TWO GA	<b>NTES</b>		155		
		CD CVCNTC	0								

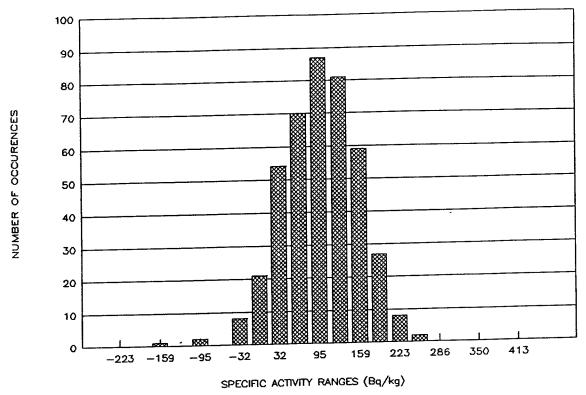
#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

2.00 Empty belt

DISTRIBUTED EVENTS 0

SORTER 1 LOG DATA FOR 08-May-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 08-MOY-93

50% 40% FREQUENCY OF OCCURENCE (%) 30% 20% 10% 0% 84 76 68 52 60 36 28 20 12 ACTIVITY RANGES (kBq)

A-46

SORTER 1 07-May-93				
AVERAGE BACKGROUND COUNT RATE	0.80 ±	0.02 c/sec		
SORTER SOIL DENSITY	1.35 tons/m	13		
GROUND SOIL DENSITY	1.65 tons/m	13		
		CONTAMINATED	CLEAN	
MASS TOTAL		1.66 tons	117.8 ton	S
MAXIMUM/SORT		7.1 kg	62.9 kg	
MINIMUM/SORT		0.8 kg	55.8 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY				98.6%
EQUIVALENT SOIL-IN-GROUND		1.32 yd <sup>3</sup>	93.4 yd <sup>3</sup>	94.7 yd3/day
DADTICLE ACTIVITY (MAYIMIN ECTIMAT	E.\			
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	E)	26,033 kBq		
TOTAL		412 kBq		
MAXIMUM/SORT MINIMUM/SORT		2.6 kBq		
MINIMON/SORT		2.0 104		
DISPERSED + PARTICLE (REALISTIC ES	TIMATE) ACTIVITY	8,623 kBq	11,078 kBq	
MAXIMUM/SORT		267 kBq	23 kBq	
MINIHUM/SORT		0 Bq	-5 kBq	
SPECIFIC ACTIVITY		5,191 Bq/kg	94 Bq/	(g
WORK HISTORY		•		
WORK DAY START	06:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	06:00 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:27 AM	END SOIL PROCESSING	05:00 PM	
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr	
WORK HOURS		11.5 hr		
AVAILABLE HOURS		11.5 hr		
	RS (total 20-sec records)	10.55 hr		
DOWN-TIME	•	0.95 hr		
TOTAL SYSTEM PAUSE		0.00 hr		
NONAVAILABLE HOURS		0.0 hr		
START-UP		0.46 hr		
SHUT-DOWN		0.49 hr		
PLANT PERFORMANCE		91.7%		
PRODUCTIVITY		91.7%		
TOTAL SOIL PROCESSING RECORDS (2-S	EC and 20-SEC)	3,487		
NONPROCESS RECORDS (Test, calibrat	ion, etc)	8		
20-SEC PROCESS RECORDS		1,899		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		1,007 AD=0 & MD=0	& MND>0	
SOME SORT		892 AD>0&0 <md<mn< td=""><td>Omax&amp;MND<mndma< td=""><td>(</td></mndma<></td></md<mn<>	Omax&MND <mndma< td=""><td>(</td></mndma<>	(
UNEXPLAINED RECORDS	S	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	2		UNEXPLAIN	PAUSE
AD=0 & I	4D 0		TIME	TIME
AD<0 & I			10:07:03	None
ACT_P <5 kBq	321 20.2%		14:35:03	

1,588 (ACT\_P >0 kBq)

18,990

						_				
					LECTOR					
	2	DETECTOR	ls .	_						
	3	DETECTOR	RS							
	4	DETECTOR	RS							
	5	DETECTOR	RS	-						
	6	DETECTOR	RS							
	7	DETECTOR	≀S							
	8	DETECTOR	SS	0						
	AVG TIME BET	WEEN 2-SE	EC SORTS		32.7	2 sec				
									5050 <b>Y</b>	ACT_P
SORTS	810	ACT_ND	NUMBER	SPEC_A			_		PREUA	(kBq)
	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kbq)
								07	E E4	4
15	1.9%	-14000								8
53	6.5%	-12000								12
121	14.9%	-10000	0							16
135	16.7%	-8000								20
176	21.7%	-6000					_			24
142	17.5%	-4000								28
114	14.1%	-2000								32
54	6.7%	0								36
810	k .	2000					_			40
		4000								44
SORTS	778	6000								48
SORTS	FREQ%	8000						•		52
		10000								56
40	5.1%	12000								60
91	11.7%	14000								64
131	16.8%	16000						-		68
134	17.2%	18000								72
149	19.2%	20000	1							76
132	17.0%	22000						_		80
101	13.0%	24000	1							84
778	3	26000								>84
		>28000								<b>704</b>
		TOTAL	1907	•			TOTAL	1588		
TOTALS								040		
HOT PART	TICLE EVENTS	1617					iL T			
				SORTS BY	TWO	GATES		110		
DISTRIBU	STED EVENTS	0								
	15 53 121 135 176 142 114 54 810 SORTS SORTS SORTS 40 91 131 134 149 132 101 778 TOTALS HOT PARI	2-SEC RECORDS  2 3 4 5 6 7 8 IT NET 2-SEC REI 2-SEC PERIOD: AVG TIME BET!  SORTS \$10 SORTS FREQ%  15 1.9% 53 6.5% 121 14.9% 135 16.7% 176 21.7% 142 17.5% 114 14.1% 54 6.7% 810  SORTS 778 SORTS FREQ%  40 5.1% 91 11.7% 131 16.8% 134 17.2% 149 19.2% 132 17.0% 101 13.0% 778	2-SEC RECORDS WITH PC 2 DETECTOR 3 DETECTOR 4 DETECTOR 5 DETECTOR 6 DETECTOR 7 DETECTOR 8 DETECTOR 10TAL NET 2-SEC RECORDS WITH NO AVG TIME BETWEEN 2-SE  SORTS 810 ACT_ND SORTS FREQ% (Bq)  15 1.9% -14000 15 1.9% -14000 15 6.5% -12000 121 14.9% -10000 135 16.7% -8000 176 21.7% -6000 142 17.5% -4000 142 17.5% -4000 142 17.5% -4000 144 14.1% -2000 54 6.7% 0 810 2000 4000 SORTS FREQ% 8000 50RTS FREQ% 8000 10000 40 5.1% 12000 91 11.7% 14000 91 11.7% 14000 131 16.8% 16000 91 11.7% 14000 131 16.8% 16000 10000 40 5.1% 12000 91 11.7% 14000 131 16.8% 16000 10000 40 5.1% 12000 91 11.7% 14000 131 16.8% 16000 10000 40 5.1% 12000 91 11.7% 14000 131 16.8% 16000 100000 100000 100000 1000000	2 DETECTORS 3 DETECTORS 4 DETECTORS 5 DETECTORS 6 DETECTORS 7 DETECTORS 8 DETECTORS 8 DETECTORS 10TAL  NET 2-SEC RECORDS WITH SORTS 2-SEC PERIODS WITH NO SORTS AVG TIME BETWEEN 2-SEC SORTS  SORTS 810 ACT_ND NUMBER SORTS FREQ% (Bq) (#)  15 1.9% -14000 0 153 6.5% -12000 1 121 14.9% -10000 0 135 16.7% -8000 1 176 21.7% -6000 2 142 17.5% -4000 2 144 14.1% -2000 10 54 6.7% 0 61 810 2000 173 4000 326 80RTS FREQ% 8000 445 80RTS FREQ% 8000 445 91 11.7% 14000 46 131 16.8% 16000 26 134 17.2% 18000 88 149 19.2% 20000 1 132 17.0% 22000 2 101 13.0% 24000 1 778 26000 0 >28000 0 TOTALS HOT PARTICLE EVENTS 1617 MULTIPARTICLE EVENTS 479	2-SEC RECORDS WITH POSITIVES IN >1 DE  2 DETECTORS 340  3 DETECTORS 62  4 DETECTORS 8  5 DETECTORS 0  6 DETECTORS 0  7 DETECTORS 0  8 DETECTORS 0  8 DETECTORS 0  7 DETECTORS 0  8 DETECTORS 0  8 DETECTORS 0  7 DETECTORS 0  8 DETECTORS 0  10 SORTS 810 ACT_ND NUMBER SPEC_A  SORTS FREQX (Bq) (#) (Bq/kg)  15 1.9% -14000 0 -223  53 6.5% -12000 1 -191  121 14.9% -10000 0 -159  135 16.7% -8000 1 -127  176 21.7% -6000 2 -95  142 17.5% -4000 2 -64  114 14.1% -2000 10 -32  54 6.7% 0 61 0  810 2000 173 32  4000 326 64  SORTS FREQX 8000 441 95  SORTS FREQX 8000 445 127  10000 246 159  40 5.1% 12000 115 191  91 11.7% 14000 46 223  131 16.8% 16000 26 254  134 17.2% 18000 8 286  149 19.2% 20000 1 318  132 17.0% 22000 2 350  101 13.0% 24000 1 382  778 26000 0 413  >28000 0 0  TOTAL 1907  TOTALS  HOT PARTICLE EVENTS 1617 SORTS B'  MULTIPARTICLE EVENTS 1617 SORTS B'  MULTIPARTICLE EVENTS 479 SORTS B'	2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR  2 DETECTORS 340  3 DETECTORS 62  4 DETECTORS 62  4 DETECTORS 0  6 DETECTORS 0  7 DETECTORS 0  8 DETECTORS 0  8 DETECTORS 0  8 DETECTORS 1  1,178  2-SEC RECORDS WITH SORTS 1,7812  2-SEC PERIODS WITH NO SORTS 17,812  AVG TIME BETWEEN 2-SEC SORTS 32.2  SORTS 810 ACT_ND NUMBER SPEC_A  SORTS FREQX (Bq) (#) (Bq/kg)  15 1.9% -14000 0 -223  53 6.5% -12000 1 -191  121 14.9% -10000 0 -159  135 16.7% -8000 1 -127  176 21.7% -6000 2 -95  142 17.5% -4000 2 -64  114 14.1% -2000 10 -32  54 6.7% 0 61 0  810 2000 173 32  4000 326 64  SORTS FREQX 8000 441 95  SORTS FREQX 8000 445 127  10000 246 159  40 5.1% 12000 115 191  91 11.7% 14000 46 223  131 16.8% 16000 26 254  134 17.2% 18000 8 286  149 19.2% 20000 1 318  132 17.0% 22000 2 350  101 13.0% 24000 1 382  778 26000 0 413  >28000 0 0  TOTAL 1907  TOTALS  HOT PARTICLE EVENTS 1617 SORTS BY ONE  MULTIPARTICLE EVENTS 479 SORTS BY ONE	2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR  2 DETECTORS 340 82.9% 3 DETECTORS 62 15.1% 4 DETECTORS 8 2.0% 5 DETECTORS 0 0.0% 6 DETECTORS 0 0.0% 7 DETECTORS 0 0.0% 7 DETECTORS 0 0.0% 8 DETECTORS 0 0.0% 8 DETECTORS 1 0.0% 10TAL 410  NET 2-SEC RECORDS WITH SORTS 1,178 2-SEC PERIODS WITH NO SORTS 17,812  AVG TIME BETWEEN 2-SEC SORTS 32.2 SEC  SORTS 810 ACT_ND NUMBER SPEC_A SORTS FREQ% (Bq) (#) (Bq/kg)  15 1.9% -14000 0 -223 53 6.5% -12000 1 -191 121 14.9% -10000 0 -159 135 16.7% -8000 1 -127 176 21.7% -6000 2 -95 142 17.5% -4000 2 -64 114 14.1% -2000 10 -32 54 6.7% 0 61 0 810 2000 173 32 54 6.7% 0 61 0 810 2000 173 32 54 6.7% 0 61 0 810 2000 173 32 55 6.7% 0 61 0 810 2000 173 32 55 6.7% 0 61 0 810 2000 173 32 55 6.7% 0 61 0 810 2000 173 32 55 6.7% 0 61 0 810 2000 173 32 17.0% 2000 173 32 181 16.8% 16000 26 254 134 17.2% 18000 8 286 149 19.2% 20000 1 318 132 17.0% 22000 2 350 101 13.0% 24000 1 382 178 26000 0 443 178 26000 0 0 413 180 28000 0 0 10 TOTAL 1907  TOTALS HOT PARTICLE EVENTS 1617 SORTS BY ONE GATE ON MULTIPARTICLE EVENTS 479 SORTS BY ONE GATE ON	2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR  2 DETECTORS 340 82.9% 3 DETECTORS 62 15.1% 4 DETECTORS 8 2.0% 5 DETECTORS 0 0.0% 6 DETECTORS 0 0.0% 7 DETECTORS 0 0.0% 7 DETECTORS 0 0.0% 8 DETECTORS 0 0.0% 8 DETECTORS 1 0.0% 10 NET 2-SEC RECORDS WITH SORTS 1,178 2-SEC PERIODS WITH NO SORTS 17,812 AVG TIME BETWEEN 2-SEC SORTS 32.2 SEC  SORTS 810 ACT_ND NUMBER SPEC_A SORTS FREQX (Bq) (#) (Bq/kg) (Bq)  15 1.9% -14000 0 -223 4000 153 6.5% -12000 1 -191 8000 121 14.9% -10000 0 -159 12000 135 16.7% -8000 1 -127 16000 135 16.7% -8000 1 -127 16000 176 21.7% -6000 2 -95 20000 176 21.7% -6000 2 -95 20000 177 176 21.7% -6000 1 -32 28000 177 176 21.7% 0 61 0 32000 177 176 21.7% 0 61 0 32000 177 177 178 179 179 1 3000 179 179 179 1 3000 170 170 170 170 170 170 170 170 170 170	2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR  2 DETECTORS 340 82.9% 3 DETECTORS 62 15.1% 4 DETECTORS 8 2.0% 5 DETECTORS 0 0.0% 6 DETECTORS 0 0.0% 7 DETECTORS 0 0.0% 8 DETECTORS 0 0.0% 107AL 410  NET 2-SEC RECORDS WITH SORTS 1,178 2-SEC PERIODS WITH NO SORTS 17,812  AVG TIME BETWEEN 2-SEC SORTS 32.2 Sec  SORTS 810 ACT_ND NUMBER SPEC_A ACT_P SORT SORTS FREQ% (Bq) (#) (Bq/kg) (Bq) (#)  15 1.9% -14000 0 -223 4000 87 533 6.5% -12000 1 -191 8000 722 121 14.9% -10000 0 -159 12000 294 135 16.7% -8000 1 -127 16000 128 176 21.7% -6000 2 -95 20000 70 142 17.5% -4000 2 -95 20000 70 142 17.5% -4000 2 -64 24000 51 114 14.1% -2000 110 -32 28000 43 54 6.7% 0 61 0 32000 37 810 2000 173 32 28000 43 54 6.7% 0 61 0 32000 37 810 2000 173 32 36000 17 810 2000 173 32 36000 17 800 326 64 40000 13 SORTS FREQ% 8000 441 95 44000 13 SORTS FREQ% 8000 445 127 48000 6 131 16.8% 16000 26 254 64000 17 SORTS FREQ% 8000 445 127 48000 6 131 16.8% 16000 26 254 64000 77 134 17.2% 18000 8 286 68000 67 134 17.2% 18000 8 286 68000 67 134 17.2% 18000 8 286 68000 67 134 17.2% 18000 8 286 68000 67 134 17.2% 18000 8 286 68000 67 134 17.2% 18000 8 286 68000 67 134 17.2% 18000 8 286 68000 67 135 17.0% 22000 1 382 80000 66 131 16.8% 16000 26 254 64000 77 132 17.0% 22000 1 382 80000 67 134 17.2% 18000 8 286 68000 67 135 17.0% 22000 1 382 80000 66 131 16.8% 16000 26 254 64000 77 132 17.0% 22000 1 382 80000 66 131 16.8% 16000 26 254 64000 77 134 17.2% 18000 8 286 68000 67 135 17.0% 22000 1 382 80000 66 131 16.8% 16000 26 254 64000 77 134 17.2% 18000 8 286 68000 68000 66 135 17.0% 22000 1 382 80000 66 136 17.0% 22000 1 382 80000 66 137 82000 0 0 984000 41 10001 246 159 70000 2000 884000 41 10001 246 2000 0 984000 41 10001 246 2000 0 984000 41 10001 246 2000 0 984000 41 10001 246 2000 0 984000 41 10001 246 2000 0 984000 41 10001 246 2000 0 984000 41 10001 246 2000 0 984000 41 10001 246 2000 0 984000 41 10001 246 2000 0 984000 41 10001 246 2000 0 984000 41 10001 246 2000 0 984000 41 10001 246 2000 0 984000 41 10001 246 2000 0 984000 41 10001 246 2000 0 984000 41 10	2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR  2 DETECTORS 340 82.9% 3 DETECTORS 62 15.1% 4 DETECTORS 8 2.0% 5 DETECTORS 0 0.0% 6 DETECTORS 0 0.0% 7 DETECTORS 0 0.0% 8 DETECTORS 0 0.0% 8 DETECTORS 0 0.0% 1014 1178 2-SEC RECORDS WITH SORTS 17,812 AVG TIME BETWEEN 2-SEC SORTS 32.2 SEC  SORTS 810 ACT_ND NUMBER SPEC_A ACT_P SORT FREQX SORTS FREQX (Bq) (#) (Bq/kg) (Bq) (#)  15 1.9% -14000 0 -223 4000 87 5.5% 53 6.5% -12000 1 -191 8000 722 45.5% 121 14.9% -10000 0 -159 12000 224 18.5% 135 16.7% -8000 1 -127 16000 128 8.1% 176 21.7% -6000 2 -95 20000 70 4.4% 142 17.5% -4000 2 -95 20000 70 4.4% 142 17.5% -4000 1 -32 28000 43 2.7% 144 14.1% -2000 10 -32 28000 43 2.7% 15 4 6.7% 0 61 0 32000 37 2.3% 810 2000 173 32 28000 43 2.7% 1400 326 64 40000 17 1.1% 15 4000 326 64 40000 17 1.1% 15 4000 326 64 40000 17 1.1% 15 4000 326 64 40000 17 1.1% 15 4000 326 64 40000 17 1.1% 15 4000 326 64 40000 17 1.1% 15 50RTS FREQX 8000 441 95 44000 17 1.1% 16 50RTS FREQX 8000 445 127 48000 6 0.4% 110 2000 115 121 5000 11 0.7% 111 11.7% 14000 46 223 60000 17 1.1% 112 14.0% 14000 226 524 64000 6 0.4% 131 16.8% 16000 26 254 64000 6 0.4% 131 16.8% 16000 26 254 64000 7 0.4% 132 17.0% 22000 1 1382 7000 6 0.4% 133 17.0% 22000 2 350 76000 8 0.5% 101 13.0% 24000 1 382 88000 6 0.4% 132 17.0% 22000 2 350 76000 8 0.5% 101 13.0% 24000 1 382 88000 6 0.4% 132 17.0% 22000 2 350 76000 8 0.5% 101 13.0% 24000 1 382 88000 6 0.4% 1778 26000 0 413 84000 41 2.6% 170TALS  HOLLTIPARTICLE EVENTS 1617 SORTS BY ONE GATE ONLY 810 HULTIPARTICLE EVENTS 479 SORTS BY ONE GATE ONLY 810 HULTIPARTICLE EVENTS 479 SORTS BY ONE GATE ONLY 810 HULTIPARTICLE EVENTS 479 SORTS BY TWO GATES 778

#### REC CODE EXPLANATION

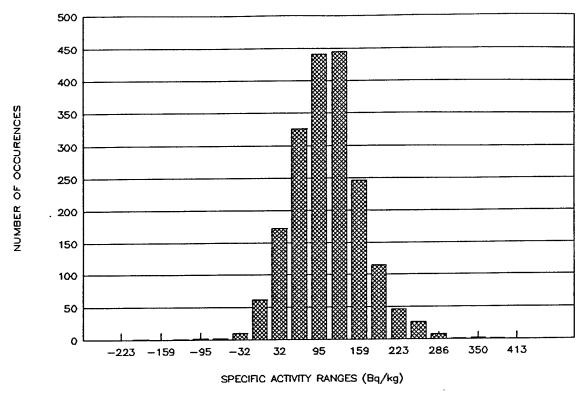
1.00 Source check (Soil on belt)

2.00 Empty belt

2-SEC COUNT PERIODS

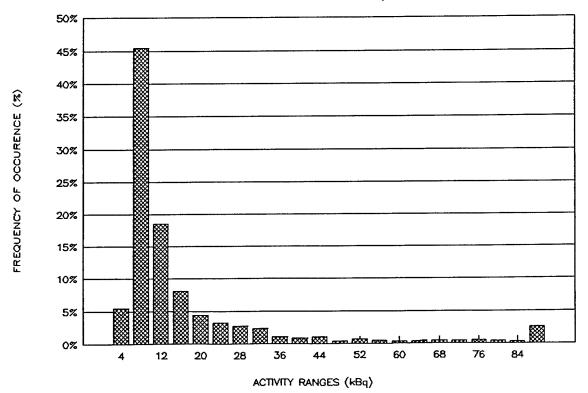
2-SEC RECORDS WITH SORTS

SORTER 1 LOG DATA FOR 07-May-93



# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 07-May-93



					•
SORTER 2 07-May-93					•
AVERAGE BACKGROUND COUNT RATE		0.87 ±	0.05 c/sec		
SORTER SOIL DENSITY		1.35 tons/m³			
GROUND SOIL DENSITY		1.65 tons/m³			
			CONTAMINATED	CLEAN	
MASS TOTAL			1.67 tons	117.8 to	ons
MAXIMUM/SORT			8.6 kg	62.9 kg	1
MINIMUM/SORT			^ 0.8 kg	54.2 kg	ı
WEIGHT RECOVERY OR VOLUME RECOV	ERY				98.6%
EQUIVALENT SOIL-IN-GROUND			1.32 yd <sup>3</sup>	93.4 yo	13 94.7 yd3/day
PARTICLE ACTIVITY (MAXIMUM ESTI	MATE)				
TOTAL			33,251 kBq		
MAXIMUM/SORT			2,542 kBq		
MINIMUM/SORT			2.6 kBq		
			10 044 184	10,564 kE	Na
DISPERSED + PARTICLE (REALISTIC	ESTIMATE) ACTI	ATTA	10,966 kBq	21 kE	-
MAXIMUM/SORT			1300 kBq	-11 ke	•
MINIMUM/SORT			-24 Bq	90 Bo	•
SPECIFIC ACTIVITY			6,567 Bq/kg	70 00	, , ,
WORK HISTORY				as 70 au	
WORK DAY START	06:00 AM		WORK DAY END	05:30 PM	
PLANT START-UP	06:00 AM		PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:25 AM		END SOIL PROCESSIA		
LUNCH START	11:30 AM		LUNCH PERIOD	0.0 hr	•
WORK HOURS			11.5 hr		
AVAILABLE HOURS	<b>,</b>		11.5 hr		
	HOURS (total 20	-sec records)	10.55 hr		
DOWN-TIME			0.95 hr		
TOTAL SYSTEM PA	USE		0.00 hr		
NONAVAILABLE HO	URS		0.0 hr		
START-UP			0.42 hr		
SHUT-DOWN			0.51 hr		
PLANT PERFORMAN	CE		91.7%		
PRODUCTIVITY			91.7%		
TOTAL SOIL PROCESSING RECORDS (	2-SEC and 20-SE	<b>c)</b>	3,429		
NONPROCESS RECORDS (Test, calib			8		
20-SEC PROCESS RECORDS			1,899		
TOTAL SORT			0 MD>0 & MND=	=0	
NO SORT			956 AD=0 & MD=0		
SOME SORT			941 AD>0&0<₩D<	NDM≥X&MND<	nax
UNEXPLAINED REC	ORDS		2		
0 <ad<1kbq &="" md=""></ad<1kbq>	0 5			UNEXPLAIN	PAUSE
AD=0	_			TIME	TIME
	& MD 1				
AD<0	& MD 1 1 4 1			07:04:24 07:41:24	None

18,990

11:42:24

	_ 020 00	2-SEC RECORD	S HITH S	ORTS		1.530	(ACT P	>0 kBq)			12:34:44
		2-SEC RECORD			IN >1 DE	-	****-		•		14:05:04
			DETECTO		312		82.3%				14:51:24
			DETECTO		58		15.3%				16:59:24
			DETECTO		9		2.4%				
			DETECTO		0		0.0%				
					0		0.0%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
			DETECTO	К2	U	379	0.0%				
			OTAL	TU 600T0							
		NET 2-SEC RE				1,151					
		2-SEC PERIOD				17,839					
		AVG TIME BET	WEEN 2-5	EC SOKIS		33.0	sec				
1-GATE	SORTS	800	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
DETECTR		FREQ%	_ (Bq)		(Bq/kg)			(Bq)	(#)		(kBq)
			•								
1	29	3.6%	-14000	2	-223			4000	65	4.2%	4
2	115	14.4%	-12000	1	-191			8000	688	45.0%	8
3	133	16.6%	-10000	1	-159			12000	267	17.5%	12
4	151	18.9%	-8000	3	-127			16000	129	8.4%	16
5	140	17.5%	-6000	1	-95			20000	82	5.4%	20
6	129	16.1%	-4000	7	-64			24000	50	3.3%	24
7	82	10.3%	-2000	22	-32			28000	47	3.1%	28
8	21	2.6%	0	77	0			32000	32	2.1%	32
TOTAL	800		2000	199	32			36000	24	1.6%	36
			4000	346	64			40000	14	0.9%	40
2-GATE	SORTS	730	6000	436	95			44000	19	1.2%	44
DETECTR	SORTS	FREQ%	8000	393	127			48000	6	0.4%	48
8			10000	198	159			52000	12	0.8%	52
9	57	7.8%	12000	127	191			56000	8	0.5%	56
10	101	13.8%	14000	49	223			60000	9	0.6%	60
11	146	20.0%	16000	24	254			64000	7	0.5%	64
12	158	21.6%	18000	14	286			68000	7	0.5%	68
13	144	19.7%	20000	6	318			72000	1	0.1%	72
14	87	11.9%	22000	1	350			76000	7	0.5%	76
15	37	5.1%	24000	0	382			80000	3	0.2%	80
TOTAL	730		26000	0	413			84000	5	0.3%	84
			>28000	0	0		>	84000	48	3.1%	>84
			TOTAL	1907				TOTAL	1530		
SUMMARY	TOTALS										
1	HOT PARTI	CLE EVENTS	1560		SORTS BY	ONE GA	TE ONL	Y	800		
1	MULTIPART	TICLE EVENTS	545		SORTS BY	TWO GA	TES		730		
1	DISTRIBUT	TED EVENTS	0								

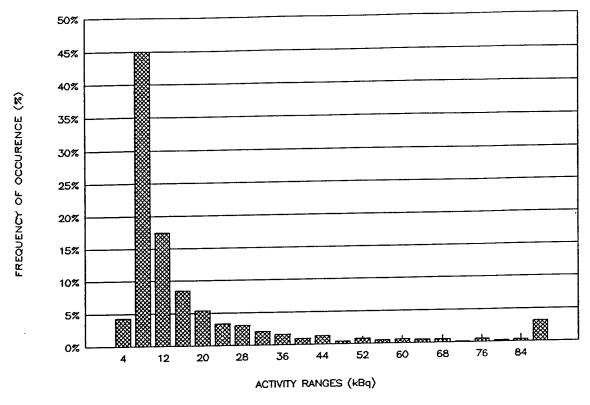
#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt

2-SEC COUNT PERIODS

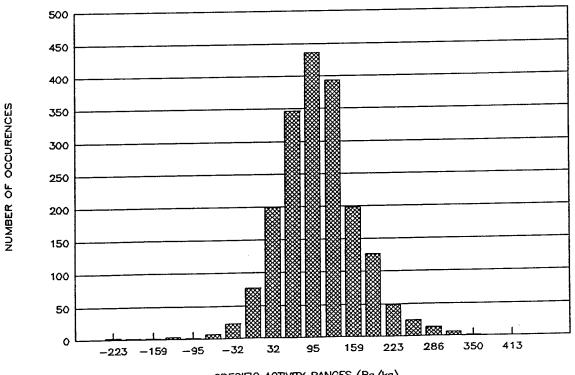
# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 07-May-93



# CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 07-May-93



SPECIFIC ACTIVITY RANGES (Bq/kg)

SORTER 1 06-May-93				•
AVERAGE BACKGROUND COUNT RATE	0.80 ±	0.03 c/sec		
SORTER SOIL DENSITY	1.35 tons/m	•		
GROUND SOIL DENSITY	1.65 tons/m	3		
		CONTAMINATED	CLEAN	
MASS TOTAL		1.78 tons	119.4 tons	
MAXIMUM/SORT		8.6 kg	62.9 kg	
MINIMUM/SORT		0.8 kg	54.2 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY	,			98.5%
EQUIVALENT SOIL-IN-GROUND	•	1.41 yd³	94.7 yd³	96.1 yd <sup>3</sup> /day
EMOLANCEM! SOLE IN GROOMS		/-		,
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	TE)			
TOTAL	•	33,309 kBq		
MAXIMUM/SORT		1,728 kBq		
MINIMUM/SORT		2.9 kBq		
<del>-</del>		•		
DISPERSED + PARTICLE (REALISTIC ES	STIMATE) ACTIVITY	10,676 kBq	11,721 kBq	
MAXIMUM/SORT		470 kBq	20 kBq	
MINIMUM/SORT		0 8q	-13 kBq	
SPECIFIC ACTIVITY		6,014 Bq/kg	98 Bq/k	g
WORK HISTORY				
WORK HISTORY WORK DAY START	06:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	06:00 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:16 AM	END SOIL PROCESSING		
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr	
WORK HOURS		11.5 hr		
AVAILABLE HOURS		11.5 hr		
	JRS (total 20-sec records)	10.71 hr		
DOWN-TIME	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	0.79 hr		
TOTAL SYSTEM PAUSE	:	0.19 hr		
NONAVAILABLE HOURS		0.0 hr		
START-UP		0.27 hr		
SHUT-DOWN		0.33 hr		
PLANT PERFORMANCE		93.1%		
PRODUCTIVITY		93.1%		
TOTAL SOIL PROCESSING RECORDS (2-5	SEC and 20-SEC1	3,628		
NONPROCESS RECORDS (Test, calibrat		9		
20-SEC PROCESS RECORDS		1,927		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		997 AD=0 & MD=0	& MND>0	
SOME SORT		930 AD>0&0 <md<mni< td=""><td>Dmax&amp;MND<mndmax< td=""><td></td></mndmax<></td></md<mni<>	Dmax&MND <mndmax< td=""><td></td></mndmax<>	
UNEXPLAINED RECORD	os	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	1		UNEXPLAIN	PAUSE
& 0=QA	MD 0		TIME	TIME
& 0>DA	MD 0		15:31:15	12:25
ACT_P <5 kBq	338 19.9%			

2-SEC COUNT PERIODS		9,270	
2-SEC RECORDS WITH SORTS		1,701 (ACT_P	>0 kBq)
2-SEC RECORDS WITH POSITIVES	IN >1 DET	ECTOR	
2 DETECTORS	369	81.5%	
3 DETECTORS	72	15.9%	
4 DETECTORS	12	2.6%	
5 DETECTORS	0	0.0%	
6 DETECTORS	0	0.0%	
7 DETECTORS	0	0.0%	
8 DETECTORS	0	0.0%	
TOTAL		453	
NET 2-SEC RECORDS WITH SORTS		1,248	
2-SEC PERIODS WITH NO SORTS	1	8,022	
AVG TIME BETWEEN 2-SEC SORTS		30.9 sec	

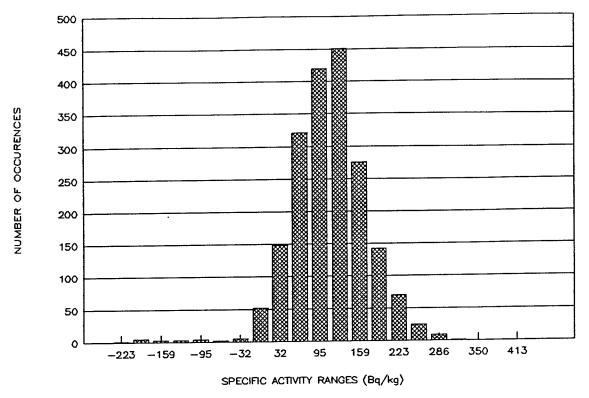
1-GATE S	ORTS	863	ACT_ND	NUMBER	SPEC_A	ACT_P		FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(pg)	(#)		(kBq)
							07	E 19	4
1	21	2.4%	-14000	1	-223	4000	87		8
2	80	9.3%	-12000	5	-191	8000	796		
3	130	15.1%	-10000	3	-159	12000	292		12
4	138	16.0%	-8000	3	-127	16000	130		16
5	159	18.4%	-6000	4	-95	20000	77	4.5%	20
6	149	17.3%	-4000	2	-64	24000	53		24
7	142	16.5%	-2000	5	-32	28000	39		28
8	44	5.1%	0	52	0	32000	39		32
TOTAL	863		2000	148	32	36000	19		36
			4000	321	64	40000	20		40
2-GATE S	ORTS	838	6000	420	95	44000	13		44
DETECTR	SORTS	FREQ%	8000	451	127	48000	17		48
8			10000	275	159	52000	13		52
9	45	5.4%	12000	142	191	56000	9		56
10	118	14.1%	14000	70	223	60000	9	0.5%	60
11	145	17.3%	16000	24	254	64000	10	0.6%	64
12	144	17.2%	18000	9	286	68000	8	0.5%	68
13	147	17.5%	20000	1	318	72000	9	0.5%	72
14	145	17.3%	22000	0	350	76000	5	0.3%	76
15	94	11.2%	24000	0	382	80000	4	0.2%	80
TOTAL	838	11122	26000	0	413	84000	6	0.4%	84
TOTAL	0.50		>28000	0	0	>84000	46	2.7%	>84
			TOTAL	1936		TOTAL	1701		
SUMMARY	2 IATOT		TOTAL	.,50					
	OT PARTIC	E EVENTS	1718		SORTS BY	ONE GATE ONLY	863		
		CLE EVENTS	523			TWO GATES	838		
	ISTRIBUTE		0						
U	121KIROIE	N EACHIO	U						

#### REC CODE EXPLANATION

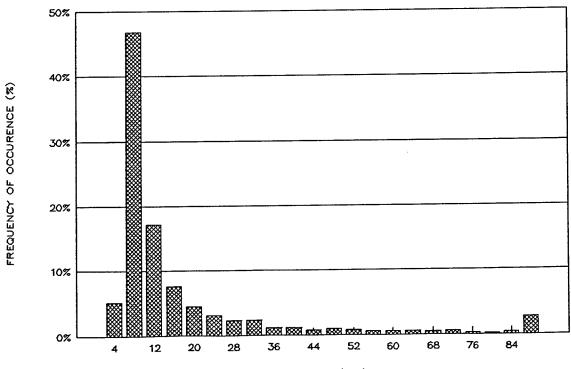
1.00 Source check (Soil on belt)

2.00 Empty belt

SORTER 1 LOG DATA FOR 06-May-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 06-May-93



ACTIVITY RANGES (kBq)

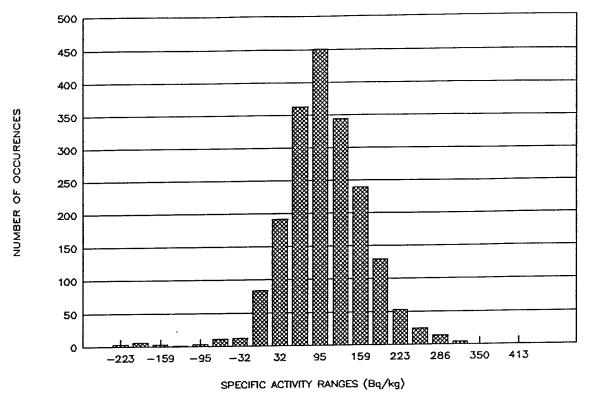
SORTER 2 06-May-93				
AVERAGE BACKGROUND COUNT RATE	0.85 ±	0.05 c/sec		
SORTER SOIL DENSITY	1.35 tons/	n <sup>3</sup>		
GROUND SOIL DENSITY	1.65 tons/	n³		
		CONTAMINATED	CLEAN	
MASS TOTAL		1.65 tons	120.1 tons	
MAXINUM/SORT		7.9 kg	62.9 kg	
MINIMUM/SORT		0.8 kg	55 kg	
				98.6%
WEIGHT RECOVERY OR VOLUME RECOVE	RY	1.31 yd <sup>3</sup>	95.2 yd³	
EQUIVALENT SOIL-IN-GROUND		i.si ya	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	7012 /4 /44/
PARTICLE ACTIVITY (MAXIMUM ESTIM	ITF)			
TOTAL	,	31,706 kBq		
· MAXIMUM/SORT		1,901 kBq		
MINIMUM/SORT		3.0 kBq		
HINIHOM/ SUKT		·		
DISPERSED + PARTICLE (REALISTIC	STIMATE) ACTIVITY	10,496 kBq	10,523 kBq	
MAXIMUM/SORT		1058 kBq	19 kBq	
MINIMUM/SORT		-453 Bq	-17 kBq	
SPECIFIC ACTIVITY		6,347 Bq/kg	88 Bq/k	g
<u>,</u>				
WORK HISTORY			as 70 m	
WORK DAY START	06:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	06:00 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:14 AM	END SOIL PROCESSING	0.0 hr	
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 111	
WORK HOURS		11.5 hr		
AVAILABLE HOURS		11.5 hr		
	OURS (total 20-sec records)	) 10.76 hr		
DOWN-TIME	•	0.74 hr		
TOTAL SYSTEM PAU	SE	0.19 hr		
NONAVAILABLE HOU		0.0 hr		
START-UP		0.24 hr		
SHUT-DOWN		0.32 hr		
PLANT PERFORMANC		93.5%		
PRODUCTIVITY		93.5%		
		7'114		
TOTAL SOIL PROCESSING RECORDS (2		3,446 0		
NONPROCESS RECORDS (Test, calibr	ation, etc)	1,936		
20-SEC PROCESS RECORDS		0 MD>0 & MND=0	1	
TOTAL SORT		1,001 AD=0 & MD=0		
NO SORT		933 AD>0&0 <md<ma< td=""><td></td><td>:</td></md<ma<>		:
SOME SORT	ane	2		
UNEXPLAINED RECO	<i>ข</i> ร 2	•	UNEXPLAIN	PAUSE
0 <ad<1kbq &="" md="">0 AD=0</ad<1kbq>			TIME	TIME
AD<0	_		12:42:56	12:25
ACT_P <5 kBq	261 17.3%		12:54:16	
VC1_L \( \sigma \sigma \sigma \sigma \)				

;	2-SEC COUNT PERIODS					19,360		17:07:56		
•		2-SEC RECORD	S WITH S	ORTS		1,510 (ACT_P	>0 kBq)		1	7:09:36
		2-SEC RECORD			IN >1 DE	-	•			
		_	DETECTO		296	83.1%				
			DETECTO		53	14.9%				
			DETECTO		6	1.7%				
			DETECTO		1	0.3%				
			DETECTO		0	0.0%				
			DETECTO		0	0.0%				
			DETECTO		0	0.0%				
			OTAL			356				
		NET 2-SEC RE		TH SORTS		1,154				
		2-SEC PERIOD				18,206				
		AVG TIME BET				33.6 sec				
1-GATE	SORTS	790	ACT_ND	NUMBER	SPEC_A		ACT_P	SORT	FREQ%	ACT_P
DETECTR		FREQ%	(Bq)		(Bq/kg)		(Bq)	(#)		(kBq)
			•		, -					
1	37	4.7%	-14000	3	-223		4000	62	4.1%	4
2	100	12.7%	-12000	6	-191		8000	719	47.6%	8
3	129	16.3%	-10000	3	-159		12000	287	19.0%	12
4	152	19.2%	-8000	1	-127		16000	119	7.9%	16
5	159	20.1%	-6000	3	-95		20000	66	4.4%	20
6	112	14.2%	-4000	11	-64		24000	34	2.3%	24
7	78	9.9%	-2000	12	-32		28000	27	1.8%	28
8	23	2.9%	0	84	0		32000	31	2.1%	32
TOTAL	790		2000	191	32		36000	20	1.3%	36
			4000	363	64		40000	14	0.9%	40
2-GATE	SORTS	720	6000	451	95		44000	20	1.3%	44
DETECTR	SORTS	FREQ%	8000	344	127		48000	15	1.0%	48
8			10000	239	159		52000	8	0.5%	52
9	<b>6</b> 6	9.2%	12000	130	191		56000	4	0.3%	56
10	85	11.8%	14000	53	223		60000	6	0.4%	60
11	136	18.9%	16000	24	254		64000	3	0.2%	64
12	153	21.3%	18000	14	286		68000	1	0.1%	68
13	147	20.4%	20000	4	318		72000	5	0.3%	72
14	80	11.1%	22000	0	350		76000	10	0.7%	76
15	53	7.4%	24000	0	382		80000	4	0.3%	80
TOTAL	<b>720</b>		26000	0	413		84000	4	0.3%	84
			>28000	0	0	>	84000	51	3.4%	>84
			TOTAL	1936			TOTAL	1510		
SUMMARY	TOTALS									
i	HOT PARTI	CLE EVENTS	1539		SORTS BY	ONE GATE ONL	Y	790		
	MULTIPART	TICLE EVENTS	547		SORTS BY	TWO GATES		720		
	DISTRIBUT	ED EVENTS	0							

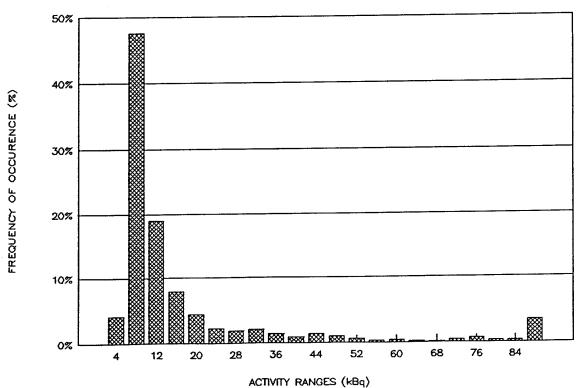
#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 06-May-93



JA SOIL CLEANUP PLANT HOT PARTICLES
SORTER 2 LOG DATA FOR 06-May-93



A-58

SORTER 1 05-May-93									
AVERAGE BACKGROUND COUNT RATE		0.80	±	0.02	c/sec				
SORTER SOIL DENSITY		1.35	tons/m³	5					
GROUND SOIL DENSITY		1.65	tons/m	5					
					CONTAM	IINATED	CLEAN		
MASS TOTAL					1.61	tons	119.7	tons	
MAXIMUM/SORT					8.6	kg	62.9	kg	
MINIMUM/SORT					0.8	kg	54.2	kg	
LICIOUT DECOUERY OF VOLUME DECOVERY	,								98.7%
WEIGHT RECOVERY OR VOLUME RECOVERY EQUIVALENT SOIL-IN-GROUND					1 28	yd³	94.9	ved3	96.2 yd³/day
EQUIVALENT SUIL-IN-GROUND					1.20	yu-	74.7	yu-	90.2 yu /uay
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	Œ)								
TOTAL					33,487	' kBq			
MAXIMUM/SORT					1,237	' kBq	•		
MINIMUM/SORT					2.9	k8q			
DISPERSED + PARTICLE (REALISTIC ES	TIMATEN ACTIVE	TV			10,392	k0a	8,983	kBa	
MAXIMUM/SORT	SITMATE) ACTIVE	11			-	kBq	_	kBq	
MINIMUM/SORT -						Bq		kBq	
SPECIFIC ACTIVITY						Bq/kg		Bq/kg	
SPECIFIC ACTIVITY					0,430	pd) va	.,	od) kg	
WORK HISTORY									
WORK DAY START	06:00 AM				WORK D	AY END	05:30 PM		
PLANT START-UP	06:00 AM				PLANT :	SHUT-DOWN	05:30 PM		
START SOIL PROCESSING	06:16 AM				END SO	IL PROCESSING	04:59 PM		
LUNCH START	11:30 AM				LUNCH	PERIOD	0.0	hr	
WORK HOURS						11.5 hr			
AVAILABLE HOURS						11.5 hr			
ACTUAL PROCESS HOU	RS (total 20-se	ec red	cords)			10.72 hr			
DOWN-TIME						0.78 hr			
TOTAL SYSTEM PAUSE						0.00 hr			
NONAVAILABLE HOURS						0.0 hr			
START-UP						0.28 hr			
SHUT-DOWN						0.51 hr			
PLANT PERFORMANCE						93.2%			
PRODUCTIVITY						93.2%			
TOTAL SOIL PROCESSING RECORDS (2-S	FC and 20-SEC)					3,519			
NONPROCESS RECORDS (Test, calibrat						4			
20-SEC PROCESS RECORDS	,,				1,929	•			
TOTAL SORT					-	MD>0 & MND=0			
NO SORT						AD=0 & MD=0 &	MND>0		
SOME SORT					-	AD>0&0 <md<mnd< td=""><td></td><td>Dmax</td><td></td></md<mnd<>		Dmax	
UNEXPLAINED RECORD	s				0				
0 <ad<1kbq &="" md="">0</ad<1kbq>	7						UNEXPLAIN	i F	PAUSE
AD=0 &	MD 0						TIME		TIME
AD<0 &	MD 0						08:25:54	N	lone
ACT_P <5 kBq	305 1	19.2%					09:57:14		

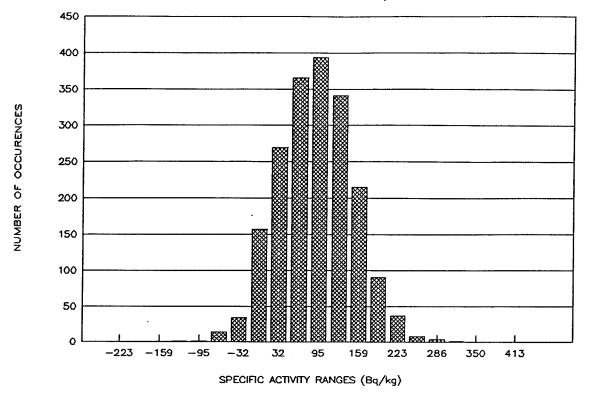
,	2-SEC COUNT PERIODS					19,290				1	1:48:54
•	2 320 000	2-SEC RECORD	2 HTTH 2	ORTS			(ACT P	>0 kBq)		1	1:59:54
		2-SEC RECORD			IN >1 DE	-		•		1	4:18:14
			DETECTO		357		83.0%			1	5:02:34
			DETECTO		58		13.5%			1	5:36:34
			DETECTO		13		3.0%				
			DETECTO		2		0.5%				
					0		0.0%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
			DETECTO	KS	U	430	0.0%				
			OTAL	T# 000TC		1,160					
		NET 2-SEC RE									
		2-SEC PERIOD				18,130					
		AVG TIME BET	WEEN 2-S	EC SORTS		33.3	sec				
1-GATE	SORTS	807	ACT ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)
			•								
1	20	2.5%	-14000	0	-223			4000	88	5.5%	4
2	70	8.7%	-12000	0	-191			8000	705	44.3%	8
3	92	11.4%	-10000	0	-159		•	12000	262	16.5%	12
4	135	16.7%	-8000	1	-127		•	16000	137	8.6%	16
5	153	19.0%	-6000	1	-95		•	20000	92	5.8%	20
6	150	18.6%	-4000	14	-64		:	24000	50	3.1%	24
7	138	17.1%	-2000	34	-32			28000	40	2.5%	28
8	49	6.1%	0	157	0		3	<b>52000</b>	38	2.4%	32
TOTAL	807		2000	270	32		3	36000	18	1.1%	36
			4000	366	64		4	40000	24	1.5%	40
2-GATE	SORTS	783	6000	394	95		4	44000	15	0.9%	44
DETECTR	SORTS	FREQ%	8000	342	127		4	48000	7	0.4%	48
8			10000	215	159		9	52000	7	0.4%	52
9	36	4.6%	12000	90	191			56000	7	0.4%	56
10	87	11.1%	14000	37	223		(	50000	5	0.3%	60
11	114	14.6%	16000	8	254		(	54000	9	0.6%	64
12	135	17.2%	18000	3	286			58000	3	0.2%	68
13	153	19.5%	20000	1	318		7	72000	2	0.1%	72
14	146	18.6%	22000	0	350		7	76000	10	0.6%	76
15	112	14.3%	24000	0	382		8	30000	6	0.4%	<b>8</b> 0
TOTAL	783	144200	26000	0	413		8	34000	3	0.2%	84.
IOIAL	105		>28000	0	0		>8	34000	62	3.9%	>84
			TOTAL	1933	•			TOTAL	1590		
SUMMARY	TOTALS		14176	.,				-			
1	OT PARTI	CLE EVENTS	1606		SORTS BY	ONE GA	TE ONLY	ſ	807		
	<b>ULTIPART</b>	ICLE EVENTS	432		SORTS BY	TWO GA	TES		783		
	DISTRIBUT	ED EVENTS	0								

#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

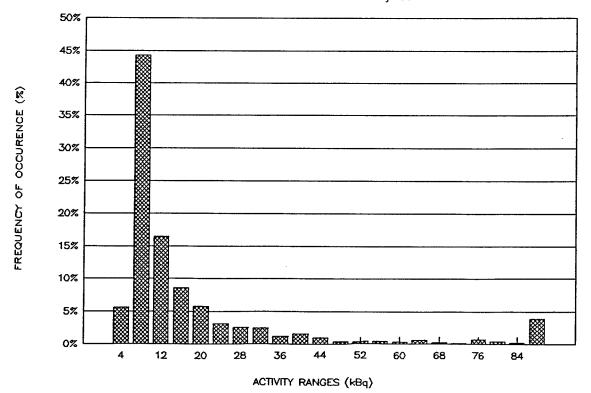
2.00 Empty belt

SORTER 1 LOG DATA FOR 05-May-93



## JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 05-May-93



SORTER 2 05-May-	93						
AVERAGE BACKGROUND COUNT	RATE	0.87	± 0.05	c/sec			
SORTER SOIL DENSITY		1.35	tons/m³				
GROUND SOIL DENSITY		1.65	tons/m³				
GROUND SOIL DEMSITT				CONTAMINATED	CLEAN		
				1.67 tons	119.5 t	ons	
MASS TOTAL				7.9 kg	62.9 k	g	
MAX1MUM/SORT				0.8 kg	55 k	g	
MINIMUM/SORT							
WEIGHT RECOVERY OR VOLUM	F RECOVERY					98.6%	
EQUIVALENT SOIL-IN-GROUN				1.32 yd³	94.7 y	d <sup>3</sup> 96.1 y	d³/day
ECINIANTEM SOLF-14 GUOCH							
PARTICLE ACTIVITY (MAXIM	UM ESTIMATE)						
TOTAL				29,918 kBq			
MAXIMUM/SORT				1,724 kBq			
MINIMUM/SORT				3.0 kBq			
				9,992 kBq	9,324 k	:Ba	
DISPERSED + PARTICLE (RE	ALISTIC ESTIMATE) ACTI	VITY		1137 kBq	18 k	=	
MAXIMUM/SORT				•	-10 k		
MINIMUM/SORT				-95 Bq		lq/kg	
SPECIFIC ACTIVITY	,			5,979 Bq/kg		·4/ ··3	
HORE MICTORY							
WORK HISTORY	06:00 AM			WORK DAY END	05:30 PM		
WORK DAY START PLANT START-UP	06:00 AM			PLANT SHUT-DOWN	05:30 PM		
START SOIL PROCES				END SOIL PROCESSING	04:58 PM		
LUNCH START	11:30 AM			LUNCH PERIOD	0.0	ır	
				44 5 5			
WORK HOL	JRS			11.5 hr 11.5 hr			
	LE HOURS			10.71 hr			
ACTUAL I	PROCESS HOURS (total 20	)-sec r	ecords)	0.79 hr			
DOWN-TI	Æ						
	STEM PAUSE			0.00 hr			
NONAVAII	ABLE HOURS			0.0 hr			
START-U				0.28 hr			
SHUT-DO	AN .			0.52 hr			
PLANT PI	ERFORMANCE			93.1%			
PRODUCT	IVITY			93.1%			
TOTAL SOIL PROCESSING R	ernane 12-ser and 20-si	FC)		3,429			
NONPROCESS RECORDS (Tes				6			
				1,927			
20-SEC PROCESS R				0 MD>0 & MND=0			
TOTAL S	un i			988 AD=0 & MD=0 8			
NO SORT SOME SO	pτ			938 AD>0&0 <md<mni< td=""><td>Omax&amp;MND&lt;</td><td>Dmax</td><td></td></md<mni<>	Omax&MND<	Dmax	
	INED RECORDS			1			
	Bq & MD>0 9				UNEXPLAIN	PAUSE	
UVMUNIK	AD=0 & MD 0				TIME	TIME	
	AD<0 & MD 1				06:26:34	None	
ACT_P <		18.1	1%		07:57:34		
YOU'L	- ·						

Printed on 05/13/93 at 03:45:42 PM

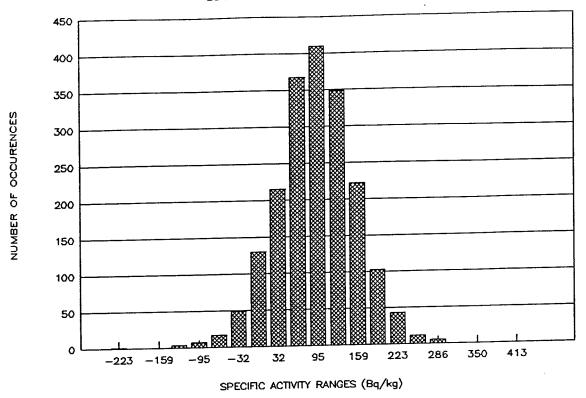
2	2-SEC COUNT PERIODS					19,270		08:33:34		
		2-SEC RECORD	S WITH S	ORTS		1,502	(ACT_P >0 kBq)	10:46:34		
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR			1	1:25:14
		2	DETECTO	RS	267		83.4%		1	1:25:54
		3	DETECTO	RS	49		15.3%		1	3:40:34
		4	DETECTO	RS	4		1.3%	13:52:14		
		5	DETECTO	RS	0		0.0%		1	5:07:54
		6	DETECTO	RS	0		0.0%		1	6:51:34
		7	DETECTO	RS	0		0.0%			
		8	DETECTO	RS	0		0.0%			
		T	OTAL			320				
		NET 2-SEC RE	CORDS WI	TH SORTS		1,182				
		2-SEC PERIOD	S WITH N	O SORTS		18,088				
		AVG TIME BET	WEEN 2-S	EC SORTS		32.6	sec			
1-GATE S	ORTS	775	ACT_ND	NUMBER	SPEC_A		ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(Bq)	(#)		(kBq)
1	42		-14000	1	-223		4000	69	4.6%	4
2	112	14.5%	-12000	0	-191		8000	695	46.3%	8
3	133	17.2%	-10000	0	-159		12000	259	17.2%	12
4	147	19.0%	-8000	3	-127		16000	142	9.5%	16
5	145	18.7%	-6000	7	-95		20000	87	5.8%	20
6	115	14.8%	-4000	17	-64		24000	40	2.7%	24
7	69	8.9%	-2000	49	-32		28000	33	2.2%	28
8	12	1.5%	0	130	0		32000	29	1.9%	32
TOTAL	775		2000	215	32		36000	28	1.9%	36
			4000	368	64		40000	10	0.7%	40
2-GATE SO	ORTS	727	6000	410	95		44000	12	0.8%	44
DETECTR	SORTS	FREQ%	8000	349	127		48000	8	0.5%	48
8			10000	222	159		52000	7	0.5%	52
9	70	9.6%	12000	103	191		56000	7	0.5%	56
10	107	14.7%	14000	43	223		60000	6	0.4%	60
11	159	21.9%	16000	11	254		64000	4	0.3%	64
12	139	19.1%	18000	5	286		68000	4	0.3%	68
13	121	16.6%	20000	0	318		72000	3	0.2%	72
14	99	13.6%	22000	0	350		76000	5	0.3%	76
15	32	4.4%	24000	0	382		80000	3	0.2%	80
TOTAL	<b>7</b> 27		26000	0	413		84000	4	0.3%	84
			>28000	0	0		>84000	47	3.1%	>84
			TOTAL	1933			TOTAL	1502		
SUMMARY 1										
		CLE EVENTS	1576		SORTS BY			775		
		ICLE EVENTS	532		SORTS BY	TWO GA	TES	727		
DI	STRIBUT	ED EVENTS	0							

#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

2.00 Empty belt

SORTER 2 LOG DATA FOR 05-May-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 05-May-93

50% 40% FREQUENCY OF OCCURENCE (%) 30% 20% 10% 0% 84 68 76 60 36 52 28 20 12

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ACTIVITY RANGES (kBq)

SORTER 1 04-May-93						
AVERAGE BACKGROUND COUNT RATE	0.80 ± 0.02	c/sec				
SORTER SOIL DENSITY	1.35 tons/m³					
GROUND SOIL DENSITY	1.65 tons/m³					
		CONTAMINATED	CLEAN			
MASS TOTAL		1.35 tons	119.3 tons			
MAXIMUM/SORT		7.1 kg	62.9 kg			
MINIMUM/SORT		0.8 kg	55.8 kg			
				00.0%		
WEIGHT RECOVERY OR VOLUME RECOVERY			<b>6</b> 4 448	98.9%		
EQUIVALENT SOIL-IN-GROUND		1.07 yd <sup>3</sup>	94.6 yd³	95.6 yd3/day		
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	E)	75 340 km				
TOTAL		35,210 kBq		-		
MAXIMUM/SORT		6,637 kBq 2.6 kBq				
MINIMUM/SORT		2.0 KBQ				
	TIMATES ACTIVITY	10,489 kBq	6,881 kBq			
DISPERSED + PARTICLE (REALISTIC ES	ITAKIE) ACITATIT	3726 kBq	20 kBq			
MAXIMUM/SORT		0 Bq	-7 kBq			
MINIMUM/SORT		7,781 Bq/kg	58 Bq/kg			
. SPECIFIC ACTIVITY						
WORK HISTORY						
WORK DAY START	06:00 AM	WORK DAY END	05:30 PM			
PLANT START-UP	06:00 AM	PLANT SHUT-DOWN	05:30 PM			
START SOIL PROCESSING	06:21 AM	END SOIL PROCESSING				
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr			
WORK HOURS		11.5 hr				
AVAILABLE HOURS		11.5 hr 10.66 hr				
	RS (total 20-sec records)	0.84 hr				
DOWN-TIME		0.00 hr				
TOTAL SYSTEM PAUSE		0.0 hr				
NONAVAILABLE HOURS		0.36 hr				
START-UP		0.49 hr				
SHUT-DOWN		92.7%				
PLANT PERFORMANCE		92.7%				
PRODUCTIVITY						
TOTAL SOIL PROCESSING RECORDS (2-S	EC and 20-SEC)	3,226				
NONPROCESS RECORDS (Test, calibrat		3				
20-SEC PROCESS RECORDS	•	1,918				
TOTAL SORT		0 MD>0 & MND=0				
NO SORT		1,179 AD=0 & MD=0 & MND>0				
SOME SORT	739 AD>0&0 <md<mn< td=""><td>Dmax&amp;MND<mndmax< td=""><td></td></mndmax<></td></md<mn<>	Dmax&MND <mndmax< td=""><td></td></mndmax<>				
UNEXPLAINED RÉCORD	s	0				
0 <ad<1kbq &="" md="">0</ad<1kbq>	5		UNEXPLAIN	PAUSE		
AD=0 &	MD 0		TIME	TIME		
& 0>DA			08:27:07	None		
ACT_P <5 kBq	258 19.7%		09:12:07			

Printed on 05/05/93 at 07:38:04 AM

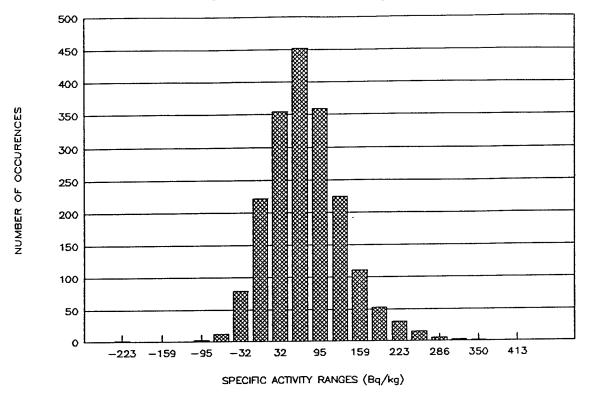
and court provide			1	9,180				09	:18:27		
2-SEC COUNT PERIODS					(ACT P	>0 kBq)		11	:44:07		
2-SEC RECORDS WITH SORTS 2-SEC RECORDS WITH POSITIVES				KIJ CITIVES			••••	•		15	:49:27
	2-				266		83.4%				
			DETECTOR		46		14.4%				
		_	DETECTOR		5		1.6%				
4 DETECTORS					0.6%						
			DETECTOR		2		0.0%				
			DETECTOR		0		0.0%				
7 DETECTORS			0		0.0%						
8 DETECTORS			0	710	0.0%						
			DTAL			319					
		T 2-SEC REC				989					
		SEC PERIODS			1	8,191					
	AV	G TIME BET	WEEN 2-SE	C SORTS		38.8	sec				
		657	ACT_ND	NI MRFR	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
1-GATE SC			(Bq)		(Bq/kg)			(Bq)	(#)		(kBq)
DETECTR	SORTS	FREQ%	(bq)	\",	(54)			-			
_	44	2.4%	-14000	1	-223			4000	68	5.2%	4
1	16	7.2%	-12000	0	-191			8000	619	47.3%	8
2	47		-10000	0	-159			12000	225	17.2%	12
3	93	14.2%	-8000	0	-127			16000	110	8.4%	16
4	118	18.0%		2	-95			20000	70	5.4%	20
5	140	21.3%	-6000	12	-64			24000	37	2.8%	24
6	109	16.6%	-4000 -2000	79	-32			28000	31	2.4%	28
7	95	14.5%	-2000	221	0			32000	26	2.0%	32
8	39	5.9%		354	32			36000	13	1.0%	36
TOTAL	657		2000 4000	452				40000	14	1.1%	40
				359				44000	10	0.8%	44
2-GATE S		651	6000	224	127			48000	8	0.6%	48
DETECTR	SORTS	FREQ%	8000	111	159			52000	9	0.7%	52
8		<b>-</b> 00/	10000	53				56000	7	0.5%	56
9	25	3.8%	12000	30				60000	5	0.4%	60
10	66	10.1%	14000	15				64000	4	0.3%	64
11	120	18.4%	16000	5				68000	6	0.5%	68
12	131	20.1%	18000	2				72000	3	0.2%	72
13	129	19.8%	20000	1				76000	5	0.4%	76
14	95	14.6%	22000	0				80000	1	0.1%	80
15	85	13.1%	24000	0				84000	3	0.2%	84
TOTAL	651		26000	0				>84000	34	2.6%	>84
			>28000		<del>.</del>		•	TOTAL	1308		
			TOTAL	1921							
SUMMARY TOTALS		1340		SORTS BY	ONE G	ATE ON	LY	657			
HOT PARTICLE EVENTS		360		SORTS BY				651			
MULTIPARTICLE EVENTS DISTRIBUTED EVENTS		300		20110 21							
D	ISTRIBUTE	D FAFMI2	U								

### REC CODE EXPLANATION

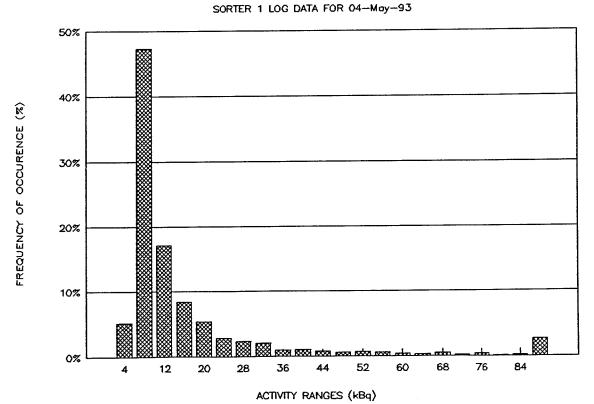
1.00 Source check (Soil on belt)

2.00 Empty belt

SORTER 1 LOG DATA FOR 04-May-93



# JA SOIL CLEANUP PLANT HOT PARTICLES



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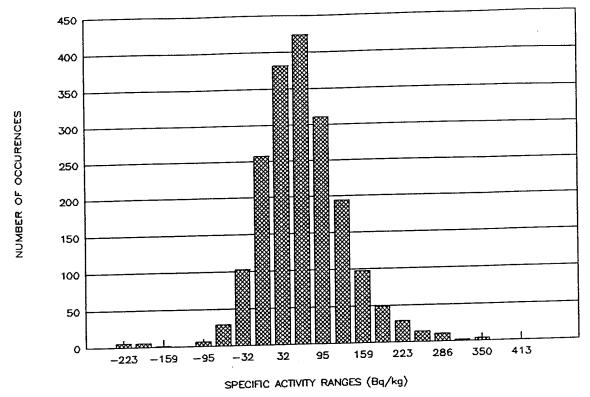
SORTER 2 04-May-93				
AVERAGE BACKGROUND COUNT RATE	0.88 ± 0.0	04 c/sec		
SORTER SOIL DENSITY	1.35 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³			
and the contract of the contra		CONTAMINATED	CLEAN	
MASS TOTAL		1.24 tons	118.7 ton	S
MAXIMUM/SORT		7.1 kg	62.9 kg	
MINIMUM/SORT		0.8 kg	55.8 kg	
	•			99.0%
WEIGHT RECOVERY OR VOLUME RECOVER	ľ	0.98 yd³	94.1 yd³	95.1 yd3/day
EQUIVALENT SOIL-IN-GROUND		0.70 /4	•	
PARTICLE ACTIVITY (MAXIMUM ESTIMA	TE)			
TOTAL		21,085 kBq		
MAXIMUM/SORT		982 kBq		
MINIMUM/SORT		2.7 kBq		
HILLIAN & AMI				
DISPERSED + PARTICLE (REALISTIC E	STIMATE) ACTIVITY	6,973 kBq	6,091 kBq	
MAXIMUM/SORT		576 kBq	21 kBq	
MINIMUM/SORT		0 Bq	-7 k8q	
SPECIFIC ACTIVITY		5,614 Bq/kg	51 Bq/	kg
			•	
WORK HISTORY WORK DAY START	06:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	06:00 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:22 AM	END SOIL PROCESSING	04:57 PM	
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr	
		44.6.1		
WORK HOURS		11.5 hr		
AVAILABLE HOURS		11.5 hr		
ACTUAL PROCESS HO	URS (total 20-sec records)	10.59 hr		
DOWN-TIME		0.91 hr 0.00 hr		
TOTAL SYSTEM PAUS	E	0.00 ftr		•
NONAVAILABLE HOUR	S	0.37 hr		
START-UP		0.57 m 0.54 hr		
SHUT-DOWN		92.1%		
PLANT PERFORMANCE PRODUCTIVITY		92.1%		
PRODUCTIVITY				
TOTAL SOIL PROCESSING RECORDS (2-	SEC and 20-SEC)	3,064		
NONPROCESS RECORDS (Test, calibra	tion, etc)	14		
20-SEC PROCESS RECORDS		1,907		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		1,199 AD=0 & MD=0		v
SOME SORT		708 AD>0&0 <md<mn< td=""><td>が</td><td>i^</td></md<mn<>	が	i^
UNEXPLAINED RECOR		0	UNEXPLAIN	PAUSE
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		TIME	TIME
AD=0 8	_		None	None
AD<0 8			RUIC	
ACT_P <5 kBq	186 16.1%			

2	-SEC COU	INT PERIODS				19,070					
_	-	2-SEC RECORD	S WITH S	DRTS		1,157	(ACT P	>0 kBq)			
		2-SEC RECORD			IN >1 DE	-	_		•		
			DETECTO		240		84.2%				
			DETECTO		35		12.3%				
			DETECTO		7		2.5%				
			DETECTO		3		1.1%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
		т	OTAL			285					
		NET 2-SEC RE		TH SORTS		872					
		2-SEC PERIOD				18,198					
		AVG TIME BET				43.7					
1-GATE S	ORTS	601	ACT_ND	NUMBER	SPEC_A		4	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)
•			•								
1	20	3.3%	-14000	5	-223			4000	39	3.4%	4
2	81	13.5%	-12000	5	-191			8000	536	46.3%	8
3	128	21.3%	-10000	1	-159			12000	213	18.4%	12
4	111	18.5%	-8000	0	-127			16000	96	8.3%	16
5	119	19.8%	-6000	6	-95		:	20000	55	4.8%	20
6	93	15.5%	-4000	29	-64		;	24000	44	3.8%	24
7	38	6.3%	-2000	103	-32		;	28000	34	2.9%	28
8	11	1.8%	0	257	0		;	32000	23	2.0%	32
TOTAL	601		2000	382	32		;	36000	8	0.7%	36
			4000	424	64			40000	17	1.5%	40
2-GATE S	ORTS	556	6000	311	95			44000	12	1.0%	44
DETECTR	SORTS	FREQ%	8000	194	127			48000	12	1.0%	48
8			10000	97	159		!	52000	6	0.5%	52
9	39	7.0%	12000	49	191			56000	4	0.3%	56
10	<b>8</b> 6	15.5%	14000	29	223			60000	5	0.4%	60
11	121	21.8%	16000	14	254			64000	5	0.4%	64
12	112	20.1%	18000	10	286			68000	5		68
13	112	20.1%	20000	2	318			72000	6		72
14	61	11.0%	22000	3				76000	3		76
15	25	4.5%	24000	0				80000		0.7%	80
TOTAL	556		26000	0	413			84000	4		84
			>28000	0	0		>	84000	22		>84
			TOTAL	1921				TOTAL	1157		
SUMMARY	TOTALS										
		ICLE EVENTS	1174		SORTS BY			Y	601		
		TICLE EVENTS	392		SORTS BY	TWO G	ATES		556		
Đ	ISTRIBU	TED EVENTS	0								

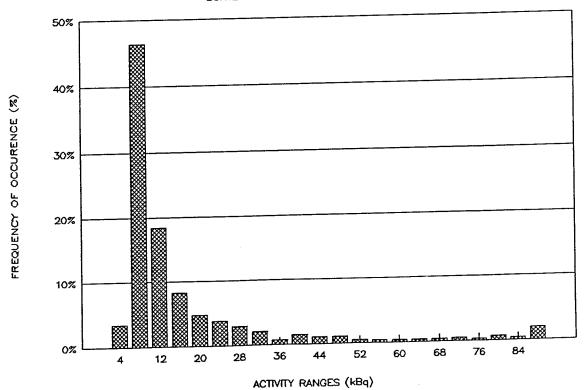
#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 04-May-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 04-MOY-93



SORTER 1 03-May-93				
AVERAGE BACKGROUND COUNT RATE	0.81 ± 0.04	c/sec		
SORTER SOIL DENSITY	1.35 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³			
		CONTAMINATED	CLEAN	
MASS TOTAL		1.89 tons	117.9 tons	
MAXIMUM/SORT		8.6 kg	62.9 kg	
MINIMUM/SORT		0.8 kg	54.2 kg	
				98.4%
WEIGHT RECOVERY OR VOLUME RECOVERY		1.50 yd³	93.4 yd³	
EQUIVALENT SOIL-IN-GROUND		1.30 yu-	75.4 70	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	)			
TOTAL		34,011 kBq		
MAXIMUM/SORT		2,585 kBq		
MINIMUM/SORT		2.8 kBq		
		44 400 10	10 757 LD-	
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTIVITY	11,188 kBq	10,352 kBq	
MAXIMUM/SORT		1528 kBq	18 kBq -5 kBq	
MINIMUM/SORT		0 Bq	88 Bq/k	•
SPECIFIC ACTIVITY		5,910 Bq/kg	00 Bq/k	
WORK HISTORY				
WORK DAY START	06:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	06:00 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:27 AM	END SOIL PROCESSING	05:02 PM	
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr	
WORK HOURS		11.5 hr		
AVAILABLE HOURS		11.5 hr		
	S (total 20-sec records)	10.58 hr		
DOWN-TIME		0.92 hr		
TOTAL SYSTEM PAUSE		0.01 hr		
NONAVAILABLE HOURS		0.0 hr		
START-UP		0.45 hr		
SHUT-DOWN		0.46 hr		
PLANT PERFORMANCE		92.0%		
PRODUCTIVITY		92.0%		
TOTAL SOIL PROCESSING RECORDS (2-SE	ic and 20-SEC)	3,675		
NONPROCESS RECORDS (Test, calibrat		3		
20-SEC PROCESS RECORDS	or, eccy	1,904		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		918 AD=0 & MD=0		
SOME SORT		986 AD>0&0 <md<mn< td=""><td></td><td></td></md<mn<>		
UNEXPLAINED RECORDS	<b>3</b>	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	8		UNEXPLAIN	PAUSE
AD=0 & I			TIME	TIME
AD<0 & I			09:00:50	09:23
ACT_P <5 kBq	344 19.4%		11:11:30	

_		- ncn100c				19,040					:12:50
2-		NT PERIODS		ntc			(ACT P	>0 kBq)		12	:07:50
	ì	2-SEC RECORDS 2-SEC RECORDS	WITH SU	KI3 CITIVES	IN >1 DE	-	···	,		12	:10:50
	7				381	120101	83.6%			13	:03:30
			DETECTOR		59		12.9%			13	:47:30
			DETECTOR		13		2.9%			15	:31:30
			DETECTOR		3		0.7%				
		_	DETECTOR		0		0.0%				
			DETECTOR				0.0%				
			DETECTOR		0		0.0%				
			DETECTOR	ts.	U	456					
		•	DTAL			1,315					
		NET 2-SEC RE				17,725					
		2-SEC PERIOD				29.0					
		AVG TIME BET	WEEN 2-SE	C SORIS		27.0	360				
4 0475 00	20.70	881	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
1-GATE SC	SORTS	FREQ%	(Bq)		(Bq/kg)			(Bq)	(#)		(kBq)
DETECTR	SURTS	IKLAN	1-42	• •							
•	28	3.2%	-14000	0	-223			4000	100	5.6%	4
. 1	64	7.3%	-12000	0	-191			8000	808	45.6%	8
· 2 3	137	15.6%	-10000	0	-159			12000	305	17.2%	12
	163	18.5%	-8000	1	-127			16000	157	8.9%	16
4	178	20.2%	-6000	1	-95		*	20000	96	5.4%	20
5	159	18.0%	-4000	2	-64			24000	53	3.0%	24
6	121	13.7%	-2000	27	-32			28000	43	2.4%	28
7 8	31	3.5%	0	83	0			32000	46	2.6%	32
	881	3.3%	2000	213	32			36000	24	1.4%	36
TOTAL	801		4000	336				40000	20	1.1%	40
2-GATE S	ODTS	890	6000	401	95			44000	19	1.1%	44
DETECTR	SORTS	FREQ%	8000	406	127			48000	12	0.7%	48
9 BEIECIK	30613	, ,,,,,,,,	10000	242	159			52000	8	0.5%	52
9	41	4.6%	12000	131				56000	5	0.3%	56
10	85	9.6%	14000	48				60000	2	0.1%	60
11	160	18.0%	16000	13	254			64000	6	0.3%	64
12	167	18.8%	18000	3				68000	4	0.2%	68
13	192	21.6%	20000	0	318			72000	6	0.3%	72
	151	17.0%	22000	0				76000	7	0.4%	76
14	94	10.6%	24000	0				80000	3	0.2%	80
15	890	10.0%	26000	O				84000	4	0.2%	84
TOTAL	670		>28000	0				>84000	43	2.4%	>84
			TOTAL	1907				TOTAL	1771		
SUMMARY	TOTALS										
		ICLE EVENTS	1829		SORTS B			LY	881		
		TICLE EVENTS	561		SORTS B	OWT Y	GATES		890		
•			_								

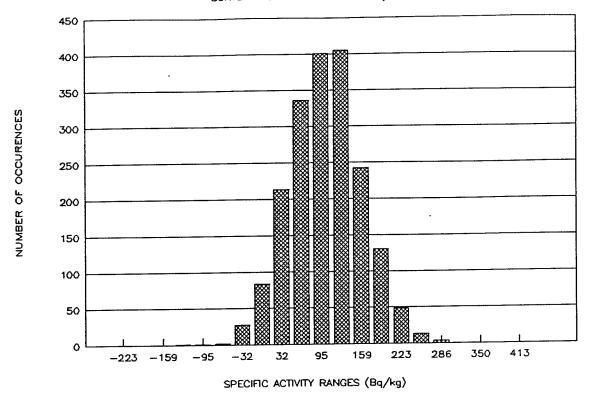
#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

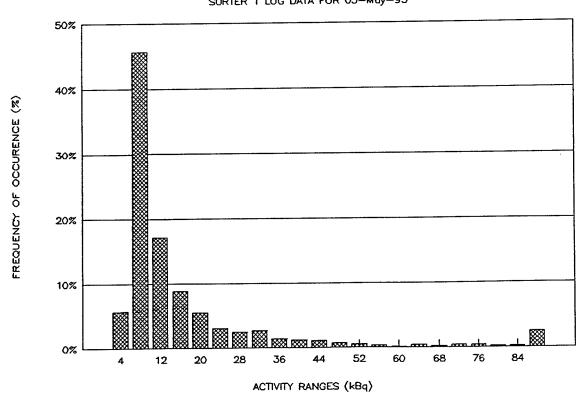
2.00 Empty belt

DISTRIBUTED EVENTS 0

SORTER 1 LOG DATA FOR 03-May-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 03-May-93



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SORTER 2 03-May-93				
AVERAGE BACKGROUND COUNT RATE	0.89 ± 0.0	)2 c/sec		
SORTER SOIL DENSITY	1.35 tons/m <sup>3</sup>			
GROUND SOIL DENSITY	1.65 tons/m <sup>3</sup>			
GROUND SOIL DEASTIT		CONTAMINATED	CLEAN	
MASS TOTAL		1.81 tons	117.8 tons	
MAXIMUM/SORT		8.6 kg	62.9 kg	
MINIMUM/SORT		0.8 kg	54.2 kg	
(IIIII)				
WEIGHT RECOVERY OR VOLUME RECOVERY				98.5%
EQUIVALENT SOIL-IN-GROUND		1.44 yd³	93.4 yd³	94.8 yd3/day
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	E)			
TOTAL		29,519 kBq		
MAXIMUM/SORT		714 kBq		
MINIMUM/SORT		2.6 kBq		
•				
DISPERSED + PARTICLE (REALISTIC ES	TIMATE) ACTIVITY	9,995 kBq	9,305 kBq	
MAXIMUM/SORT		438 kBq	18 kBq	
MINIMUM/SORT		0 Bq	-7 kBq	
SPECIFIC ACTIVITY		5,509 Bq/kg	79 Bq/k	(g
WORK HISTORY			or 70 by	
WORK DAY START	06:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	06:00 AM	PLANT SHUT-DOWN	05:30 PM 05:01 PM	
START SOIL PROCESSING	06:28 AM	END SOIL PROCESSING	0.0 hr	
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 111	
		11.5 hr		
WORK HOURS		11.5 hr		
AVAILABLE HOURS	ma (tasal 20 mag maganda)	10.57 hr		
	RS (total 20-sec records)	0.93 hr		
DOWN-TIME		0.00 hr		
TOTAL SYSTEM PAUSE		0.0 hr		
NONAVAILABLE HOURS	i	0.47 hr		
START-UP		0.47 hr		
SHUT-DOWN		91.9%		
PLANT PERFORMANCE		91.9%		
PRODUCTIVITY		7,42,10		
TOTAL SOIL PROCESSING RECORDS (2-5	EC and 20-SEC)	3,616		
NONPROCESS RECORDS (Test, calibrat		6		
20-SEC PROCESS RECORDS	itory ecoy	1,902		
ZU-SEC PROCESS RECORDS		0 MD>0 & MND=0		
NO SORT		954 AD=0 & MD=0 8		
SOHE SORT		948 AD>0&0 <md<mn< td=""><td>omax&amp;MND<mndmax< td=""><td><b>(</b></td></mndmax<></td></md<mn<>	omax&MND <mndmax< td=""><td><b>(</b></td></mndmax<>	<b>(</b>
UNEXPLAINED RECORD	ns.	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	6		UNEXPLAIN	PAUSE
AD=0 &			TIME	TIME
AD<0 &	· · ·		07:24:20	None
ACT_P <5 kBq	267 15.6%		07:36:40	
ACI_P <> KBQ	20			

2-SEC COUNT PERIODS  2-SEC RECORDS WITH SORTS  1,714 (ACT_P > 0 kBq)  15:1  2-SEC RECORDS WITH POSITIVES IN > 1 DETECTOR  2 DETECTORS  3 DETECTORS  58  13.9%  4 DETECTORS  7 1.7%  5 DETECTORS  6 DETECTORS  0 0.0%	:20
2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR 16:1  2 DETECTORS 351 84.0% 16:5  3 DETECTORS 58 13.9% 4 DETECTORS 7 1.7% 5 DETECTORS 2 0.5%	
2 DETECTORS 351 84.0% 16:5 3 DETECTORS 58 13.9% 4 DETECTORS 7 1.7% 5 DETECTORS 2 0.5%	:00
3 DETECTORS 58 13.9% 4 DETECTORS 7 1.7% 5 DETECTORS 2 0.5%	
4 DETECTORS 7 1.7% 5 DETECTORS 2 0.5%	
5 DETECTORS 2 0.5%	
3 0212010110	
7 DETECTORS 0 0.0%	
8 DETECTORS 0 0.0%	
TOTAL 418	
NET 2-SEC RECORDS WITH SORTS 1,296	
2-SEC PERIODS WITH NO SORTS 17,724	
AVG TIME BETWEEN 2-SEC SORTS 29.4 sec	
Med this princes a good and	
1-GATE SOKIS DAD WOLDEN OLEOTH	T_P
DETECTR SORTS FREQ% (Bq) (#) (Bq/kg) (Bq) (#)	:Bq)
1 34 3.8% -14000 2 -223 4000 90 5.3%	4
2 120 13.4% -12000 1 -191 8000 788 46.0%	8
3 205 22.8% -10000 0 -159 12000 284 16.6%	12
4 186 20.7% -8000 0 -127 16000 155 9.0%	16
5 159 17.7% -6000 4 -95 20000 96 5.6%	20
6 109 12.1% -4000 11 -64 24000 61 3.6%	24
7 68 7.6% -2000 45 -32 28000 40 2.3%	28
8 17 1.9% 0 115 0 32000 31 1.8%	32
TOTAL 898 2000 240 32 36000 19 1.1%	36
4000 354 64 40000 14 0.8%	40
2-GATE SORTS 816 6000 380 95 44000 11 0.6%	44
DETECTR SORTS FREQX 8000 376 127 48000 16 0.9%	48
8 10000 232 159 52000 11 0.6%	52
9 51 6.3% 12000 102 191 56000 12 0.7%	56
10 121 14.8% 14000 31 223 60000 7 0.4%	60
11 199 24.4% 16000 12 254 64000 9 0.5%	64
12 190 23.3% 18000 2 286 68000 7 0.4%	68
13 123 15.1% 20000 1 318 72000 4 0.2%	72
14 91 11.2% 22000 0 350 76000 3 0.2%	76
15 41 5.0% 24000 0 382 80000 5 0.3%	80
TOTAL 816 26000 0 413 84000 6 0.4%	84
>28000 0 0 >84000 45 2.6%	>84
TOTAL 1908 TOTAL 1714	
SUMMARY TOTALS	

#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

0

2.00 Empty belt

DISTRIBUTED EVENTS

3.00 Test (No process soil)

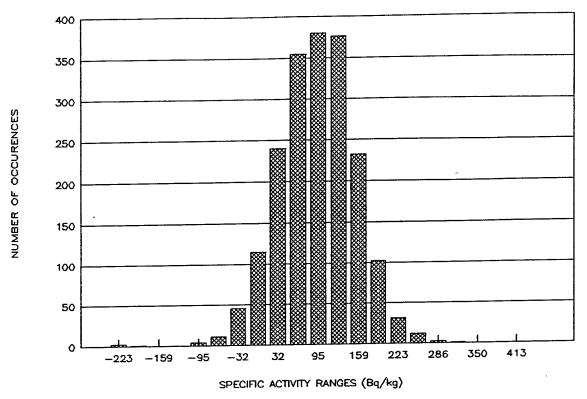
HOT PARTICLE EVENTS 1727
MULTIPARTICLE EVENTS 563

898

816

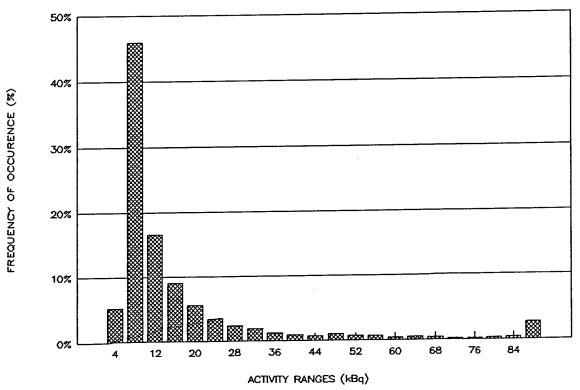
SORTS BY ONE GATE ONLY SORTS BY TWO GATES

SORTER 2 LOG DATA FOR 03-May-93



# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 03-May-93



SORTER 1 01-May-93				
AVERAGE BACKGROUND COUNT RATE	0.82 ± 0.0	04 c/sec		
SORTER SOIL DENSITY	1.35 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³			
ansons sold selection		CONTAMINATED	CLEAN	
MASS TOTAL		1.16 tons	80.5 tons	3
MAXIMUM/SORT		6.3 kg	62.9 kg	
MINIMUM/SORT		0.8 kg	56.6 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY				98.6%
EQUIVALENT SOIL-IN-GROUND		0.92 yd³	63.8 yd³	64.8 yd³/day
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	)	•		
TOTAL		25,922 kBq		
MAXIMUM/SORT		1,459 kBq		
MINIMUM/SORT		2.6 kBq		
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTIVITY	8,168 kBq	6,627 kBq	
MAXIMUM/SORT		795 kBq	21 kBq	
MINIMUM/SORT		0 Bq	-6 kBq	
SPECIFIC ACTIVITY		7,025 Bq/kg	82 Bq/	(g
WORK HISTORY				
WORK DAY START	06:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	06:00 AM	PLANT SHUT-DOWN	01:45 PM	
START SOIL PROCESSING	06:24 AM	END SOIL PROCESSING		
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr	
WORK HOURS		11.5 hr		
AVAILABLE HOURS		7.7 hr		
ACTUAL PROCESS HOUR	S (total 20-sec records)	7.22 hr		
DOWN-TIME		0.53 hr		
TOTAL SYSTEM PAUSE		0.00 hr		
NONAVAILABLE HOURS		3.8 hr		
START-UP		0.41 hr		
SHUT-DOWN		0.13 hr		
PLANT PERFORMANCE		93.1%		
PRODUCTIVITY		62.8%		
	4.00 000	2,430		
TOTAL SOIL PROCESSING RECORDS (2-SI		2,430		-
NONPROCESS RECORDS (Test, calibrat	ion, etc)			
20-SEC PROCESS RECORDS		1,299 0 MD>0 & MND=0		
TOTAL SORT		670 AD=0 & MD=0 8		
NO SORT		629 AD>0&0 <md<mni< td=""><td></td><td>Y</td></md<mni<>		Y
SOME SORT			PRESCUENCE STRUME	
UNEXPLAINED RECORDS		0	UNEXPLAIN	PAUSE
0 <ad<1kbq &="" md="">0</ad<1kbq>	2		TIME	TIME
AD=0 & 1			06:38:44	None
AD<0 & I			12:21:24	
ACT_P <5 kBq	232 20.5%			

2-SEC COUNT PERIODS	12,	
2-SEC RECORDS WITH SORTS	1,	131 (ACT_P >0 kBq)
2-SEC RECORDS WITH POSITIVES	IN >1 DETEC	TOR
2 DETECTORS	254	85.8%
3 DETECTORS	39	13.2%
4 DETECTORS	3	1.0%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL		296
NET 2-SEC RECORDS WITH SORTS		835
2-SEC PERIODS WITH NO SORTS	12,	155
AVG TIME BETWEEN 2-SEC SORTS	3	1.1 sec

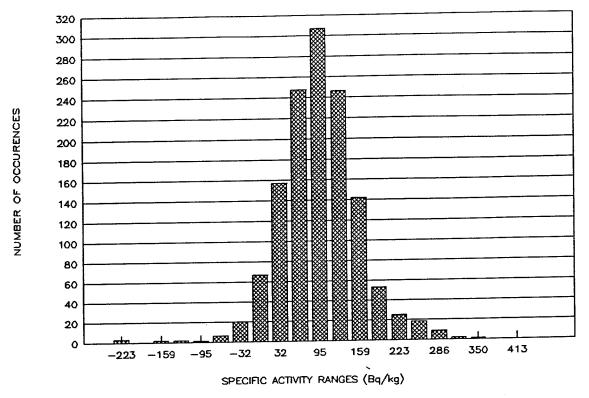
4 6475 66	DOTE	568	ACT ND	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
1-GATE SO	SORTS	FREQ%	(Bq)		(Bq/kg)	(Bq)	(#)		(kBq)
DETECTR	30K13	1 KC4A	(54)	• • •					
	24	4.2%	-14000	3	-223	4000	67	5.9%	4
1	24 46	8.1%	-12000	0	-191	8000	519	45.9%	8
2	40 91	16.0%	-10000	2	-159	12000	166	14.7%	12
3	91 98	17.3%	-8000	2	-127	16000	111	9.8%	16
4	119	21.0%	-6000	1	-95	20000	58	5.1%	20
5	72	12.7%	-4000	6	-64	24000	31	2.7%	24
6 7	72 90	15.8%	-2000	20	-32	28000	24	2.1%	28
-		4.9%	0	67	0	32000	21	1.9%	32
8	28	4.76	2000	157		36000	14	1.2%	36
TOTAL	568		4000	247		40000	18	1.6%	40
		563	6000	307		44000	11	1.0%	44
2-GATE S		FREQ%	8000	246		48000	4	0.4%	48
DETECTR	SORTS	FREUA	10000	142		52000	9	0.8%	52
8	70	5.7%	12000	53		56000	5	0.4%	56
9	32	12.8%	14000	25		60000	7	0.6%	60
10	72 01	15.3%	16000	18		64000	2	0.2%	64
11	86	19.0%	18000	9		68000	7	0.6%	68
12	107	19.2%	20000	2		72000	. 2	0.2%	72
13	108	14.9%	22000	1		76000	10	0.9%	76
14	84 74	13.1%	24000	0		80000	5	0.4%	80
15		13.14	26000	o		84000	1	0.1%	84
TOTAL	563		>28000	0		>84000	39	3.4%	>84
			TOTAL	1308		TOTAL	1131		
			IOIAL	1500	!				
SUMMARY			1146		SORTS RY	ONE GATE ONLY	568	}	
	OT PARTIC					TWO GATES	563	;	
		CLE EVENTS	320		JUNIO DI	1			
ε	ISTRIBUTE	D EVENTS	0						

#### REC CODE EXPLANATION

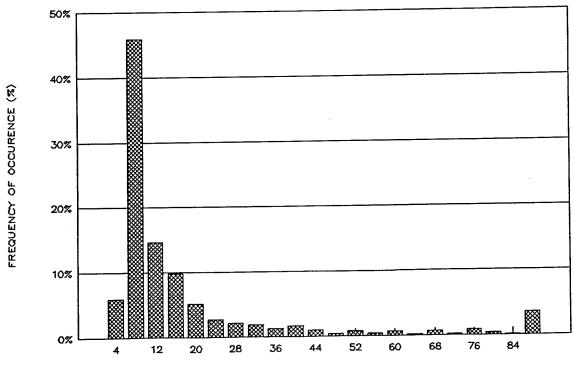
1.00 Source check (Soil on belt)

2.00 Empty belt

SORTER 1 LOG DATA FOR 01-May-93 .



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 01-May-93



ACTIVITY RANGES (kBq)

A-79

SORTER 2 01-May-93									
AVERAGE BACKGROUND COUNT RATE		0.89	±	0.03	c/sec				
SORTER SOIL DENSITY		1.35	tons/m	3					
GROUND SOIL DENSITY		1.65	tons/m	3					
					CONTAM	INATED	CLEAN		
MASS TOTAL						tons		tons	
MAXIMUM/SORT						kg	62.9		
MINIMUM/SORT					0.8	kg	55.8	kg	
									98.5%
WEIGHT RECOVERY OR VOLUME RECOVERY							64.0	, ed 3	64.9 yd3/day
EQUIVALENT SOIL-IN-GROUND					0.94	yd <sup>3</sup>	04.0	yu	04.7 /2 / /
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	)			•	17,388	L LRG			
TOTAL					-	kBq	•		
MAXIMUM/SORT						kBq			
MINIMUM/SORT					3.0	Koq			
		1 TV			5,834	kBa	5,698	kBq	
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACITY	111			•	kBq	_	kBq	
MAXIMUM/SORT						) Bq	-8	kBq	
MINIMUM/SORT						Bq/kg	71	Bq/kg	
SPECIFIC ACTIVITY					7,71-	,			
WORK HISTORY									
WORK HISTORY WORK DAY START	06:00 AM				WORK D	AY END	05:30 PM		
PLANT START-UP	06:00 AM				PLANT	SHUT-DOWN	01:45 PM		
START SOIL PROCESSING	06:24 AM				END SC	IL PROCESSING	01:38 PM		
LUNCH START	11:30 AM				LUNCH	PERIOD	0.0	hr	
Editor Truck									
WORK HOURS						11.5 hr			
AVAILABLE HOURS						7.7 hr			
ACTUAL PROCESS HOUF	S (total 20-	sec r	ecords)	)		7.23 hr			
DOWN-TIME						0.52 hr			
TOTAL SYSTEM PAUSE						0.00 hr			
NONAVAILABLE HOURS						3.8 hr			
START-UP						0.41 hr			
SHUT-DOWN						0.11 hr			
PLANT PERFORMANCE						93.3% 62.9%			
PRODUCTIVITY						02.74			
2.50 PERSONNEL (2.5)	c and 20-SEC	٠,				2,424			
TOTAL SOIL PROCESSING RECORDS (2-SI		••				 6			
NOMPROCESS RECORDS (Test, calibrat 20-SEC PROCESS RECORDS	ion, etc,				1,30	2			
TOTAL SORT						0 MD>0 & MND=0			
NO SORT						1 AD=0 & MD=0 8			
SOME SORT					63	1 AD>0&0 <md<mni< td=""><td>N&gt; CIAM&amp;xamC</td><td>INDmax</td><td></td></md<mni<>	N> CIAM&xamC	INDmax	
UNEXPLAINED RECORDS	S				(	0			
0 <ad<1kbq &="" md="">0</ad<1kbq>	3 ୍						UNEXPLA	IN	PAUSE
AD=0 & 1	_						TIME		TIME
AD<0 & 1	40 O						08:08:04	•	None
ACT_P <5 kBq	197	17.6	5%				11:39:44	•	

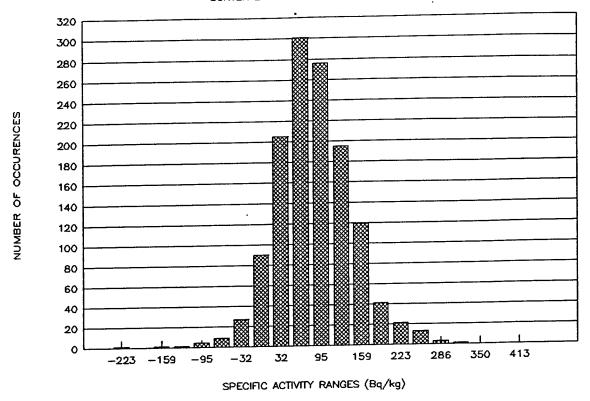
2-SEC COUNT PERIODS 13,020 2-SEC RECORDS WITH SORTS 1,122 (ACT_P > 0 kBq) 2-SEC RECORDS WITH POSITIVES IN > 1 DETECTOR 2 DETECTORS 227 87.0% 3 DETECTORS 32 12.3% 4 DETECTORS 2 0.8% 5 DETECTORS 0 0.0% 6 DETECTORS 0 0.0% 7 DETECTORS 0 0.0% 8 DETECTORS 0 0.0% 8 DETECTORS 0 0.0% 10TAL 261 NET 2-SEC RECORDS WITH SORTS 861 2-SEC PERIODS WITH NO SORTS 12,159 AVG TIME BETWEEN 2-SEC SORTS 30.2 SEC  1-GATE SORTS 588 ACT_ND NUMBER SPEC_A ACT_P SORT FREQX DETECTR SORTS FREQ% (Bq) (#) (Bq/kg) (Bq) (#)  1 29 4.9% -14000 1 -223 4000 59 5.3% 2 105 17.9% -12000 0 -191 8000 510 45.5% 3 93 15.8% -10000 1 -159 12000 213 19.0% 4 98 16.7% -8000 1 -127 16000 97 8.6% 5 111 18.9% -6000 4 -95 20000 52 4.6% 6 77 13.1% -4000 9 -64 24000 44 3.9% 7 59 10.0% -2000 27 -32 28000 23 2.0%	
2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR  2 DETECTORS 227 87.0%  3 DETECTORS 32 12.3%  4 DETECTORS 2 0.8%  5 DETECTORS 0 0.0%  6 DETECTORS 0 0.0%  7 DETECTORS 0 0.0%  8 DETECTORS 0 0.0%  TOTAL 261  NET 2-SEC RECORDS WITH SORTS 861  2-SEC PERIODS WITH NO SORTS 12,159  AVG TIME BETWEEN 2-SEC SORTS 30.2 SEC  1-GATE SORTS 588 ACT_ND NUMBER SPEC_A ACT_P SORT FREQX  DETECTR SORTS FREQX (Bq) (#) (Bq/kg) (Bq) (#)  1 29 4.9% -14000 1 -223 4000 59 5.3%  2 105 17.9% -12000 0 -191 8000 510 45.5%  3 93 15.8% -10000 1 -159 12000 213 19.0%  4 98 16.7% -8000 1 -127 16000 97 8.6%  5 111 18.9% -6000 4 -95 20000 52 4.6%  6 77 13.1% -4000 9 -64 24000 44 3.9%	
2 DETECTORS 227 87.0% 3 DETECTORS 32 12.3% 4 DETECTORS 2 0.8% 5 DETECTORS 0 0.0% 6 DETECTORS 0 0.0% 7 DETECTORS 0 0.0% 7 DETECTORS 0 0.0% 8 DETECTORS 0 0.0% 10TAL 261 NET 2-SEC RECORDS WITH SORTS 861 2-SEC PERIODS WITH NO SORTS 12,159 AVG TIME BETWEEN 2-SEC SORTS 30.2 SEC  1-GATE SORTS 588 ACT_ND NUMBER SPEC_A ACT_P SORT FREQ% DETECTR SORTS FREQ% (Bq) (#) (Bq/kg) (Bq) (#)  1 29 4.9% -14000 1 -223 4000 59 5.3% 2 105 17.9% -12000 0 -191 8000 510 45.5% 3 93 15.8% -10000 1 -159 12000 213 19.0% 4 98 16.7% -8000 1 -127 16000 97 8.6% 5 111 18.9% -6000 4 -95 20000 52 4.6% 6 77 13.1% -4000 9 6-64 24000 44 3.9%	
3 DETECTORS 32 12.3% 4 DETECTORS 2 0.8% 5 DETECTORS 0 0.0% 6 DETECTORS 0 0.0% 7 DETECTORS 0 0.0% 8 DETECTORS 0 0.0% 10TAL 261 NET 2-SEC RECORDS WITH SORTS 861 2-SEC PERIODS WITH NO SORTS 12,159 AVG TIME BETWEEN 2-SEC SORTS 30.2 Sec  1-GATE SORTS 588 ACT_ND NUMBER SPEC_A ACT_P SORT FREQ% DETECTR SORTS FREQ% (Bq) (#) (Bq/kg) (Bq) (#)  1 29 4.9% -14000 1 -223 4000 59 5.3% 2 105 17.9% -12000 0 -191 8000 510 45.5% 3 93 15.8% -10000 1 -159 12000 213 19.0% 4 98 16.7% -8000 1 -127 16000 97 8.6% 5 111 18.9% -6000 4 -95 20000 52 4.6% 6 77 13.1% -4000 9 -64 24000 44 3.9%	
4 DETECTORS 2 0.8% 5 DETECTORS 0 0.0% 6 DETECTORS 0 0.0% 7 DETECTORS 0 0.0% 8 DETECTORS 0 0.0% 10TAL 261 NET 2-SEC RECORDS WITH SORTS 861 2-SEC PERIODS WITH NO SORTS 12,159 AVG TIME BETWEEN 2-SEC SORTS 30.2 SEC  1-GATE SORTS 588 ACT_ND NUMBER SPEC_A ACT_P SORT FREQ% DETECTR SORTS FREQ% (Bq) (#) (Bq/kg) (Bq) (#)  1 29 4.9% -14000 1 -223 4000 59 5.3% 2 105 17.9% -12000 0 -191 8000 510 45.5% 3 93 15.8% -10000 1 -159 12000 213 19.0% 4 98 16.7% -8000 1 -159 12000 213 19.0% 4 98 16.7% -8000 1 -127 16000 97 8.6% 5 111 18.9% -6000 4 -95 20000 52 4.6% 6 77 13.1% -4000 9 -64 24000 44 3.9%	
5 DETECTORS 0 0.0% 6 DETECTORS 0 0.0% 7 DETECTORS 0 0.0% 8 DETECTORS 0 0.0% 8 DETECTORS 0 0.0% TOTAL 261 NET 2-SEC RECORDS WITH SORTS 861 2-SEC PERIODS WITH NO SORTS 12,159 AVG TIME BETWEEN 2-SEC SORTS 30.2 SEC  1-GATE SORTS 588 ACT_ND NUMBER SPEC_A ACT_P SORT FREQX DETECTR SORTS FREQX (Bq) (#) (Bq/kg) (Bq) (#)  1 29 4.9% -14000 1 -223 4000 59 5.3% 2 105 17.9% -12000 0 -191 8000 510 45.5% 3 93 15.8% -10000 1 -159 12000 213 19.0% 4 98 16.7% -8000 1 -159 12000 213 19.0% 4 98 16.7% -8000 1 -127 16000 97 8.6% 5 111 18.9% -6000 4 -95 20000 52 4.6% 6 77 13.1% -4000 9 -64 24000 44 3.9%	
6 DETECTORS 0 0.0% 7 DETECTORS 0 0.0% 8 DETECTORS 0 0.0% TOTAL 261 NET 2-SEC RECORDS WITH SORTS 861 2-SEC PERIODS WITH NO SORTS 12,159 AVG TIME BETWEEN 2-SEC SORTS 30.2 sec  1-GATE SORTS 588 ACT_ND NUMBER SPEC_A ACT_P SORT FREQX DETECTR SORTS FREQX (Bq) (#) (Bq/kg) (Bq) (#)  1 29 4.9% -14000 1 -223 4000 59 5.3% 2 105 17.9% -12000 0 -191 8000 510 45.5% 3 93 15.8% -10000 1 -159 12000 213 19.0% 4 98 16.7% -8000 1 -127 16000 97 8.6% 5 111 18.9% -6000 4 -95 20000 52 4.6% 6 77 13.1% -4000 9 -64 24000 44 3.9%	
7 DETECTORS 0 0.0% 8 DETECTORS 0 0.0% TOTAL 261 NET 2-SEC RECORDS WITH SORTS 861 2-SEC PERIODS WITH NO SORTS 12,159 AVG TIME BETWEEN 2-SEC SORTS 30.2 SEC  1-GATE SORTS 588 ACT_ND NUMBER SPEC_A ACT_P SORT FREQ% DETECTR SORTS FREQ% (Bq) (#) (Bq/kg) (Bq) (#)  1 29 4.9% -14000 1 -223 4000 59 5.3% 2 105 17.9% -12000 0 -191 8000 510 45.5% 3 93 15.8% -10000 1 -159 12000 213 19.0% 4 98 16.7% -8000 1 -159 12000 213 19.0% 4 98 16.7% -8000 1 -127 16000 97 8.6% 5 111 18.9% -6000 4 -95 20000 52 4.6% 6 77 13.1% -4000 9 -64 24000 44 3.9% 6 77 13.1% -4000 9 -64 24000 44 3.9%	
8 DETECTORS 0 0.0%  TOTAL 261  NET 2-SEC RECORDS WITH SORTS 861  2-SEC PERIODS WITH NO SORTS 12,159  AVG TIME BETWEEN 2-SEC SORTS 30.2 Sec  1-GATE SORTS 588 ACT_ND NUMBER SPEC_A ACT_P SORT FREQ%  DETECTR SORTS FREQ% (Bq) (#) (Bq/kg) (Bq) (#)  1 29 4.9% -14000 1 -223 4000 59 5.3%  2 105 17.9% -12000 0 -191 8000 510 45.5%  3 93 15.8% -10000 1 -159 12000 213 19.0%  4 98 16.7% -8000 1 -127 16000 97 8.6%  5 111 18.9% -6000 4 -95 20000 52 4.6%  6 77 13.1% -4000 9 -64 24000 44 3.9%	
TOTAL 261  NET 2-SEC RECORDS WITH SORTS 861  2-SEC PERIODS WITH NO SORTS 12,159  AVG TIME BETWEEN 2-SEC SORTS 30.2 SEC  1-GATE SORTS 588 ACT_ND NUMBER SPEC_A ACT_P SORT FREQX  DETECTR SORTS FREQX (Bq) (#) (Bq/kg) (Bq) (#)  1 29 4.9% -14000 1 -223 4000 59 5.3%  2 105 17.9% -12000 0 -191 8000 510 45.5%  3 93 15.8% -10000 1 -159 12000 213 19.0%  4 98 16.7% -8000 1 -127 16000 97 8.6%  5 111 18.9% -6000 4 -95 20000 52 4.6%  6 77 13.1% -4000 9 -64 24000 44 3.9%	
NET 2-SEC RECORDS WITH SORTS 861 2-SEC PERIODS WITH NO SORTS 12,159 AVG TIME BETWEEN 2-SEC SORTS 30.2 SEC  1-GATE SORTS 588 ACT_ND NUMBER SPEC_A ACT_P SORT FREQX DETECTR SORTS FREQX (Bq) (#) (Bq/kg) (Bq) (#)  1 29 4.9% -14000 1 -223 4000 59 5.3% 2 105 17.9% -12000 0 -191 8000 510 45.5% 3 93 15.8% -10000 1 -159 12000 213 19.0% 4 98 16.7% -8000 1 -127 16000 97 8.6% 5 111 18.9% -6000 4 -95 20000 52 4.6% 6 77 13.1% -4000 9 -64 24000 44 3.9%	
2-SEC PERIODS WITH NO SORTS AVG TIME BETWEEN 2-SEC SORTS 10.2 sec  1-GATE SORTS 588	
AVG TIME BETWEEN 2-SEC SORTS 30.2 Sec  1-GATE SORTS 588 ACT_ND NUMBER SPEC_A DETECTR SORTS FREQX (Bq) (#) (Bq/kg) (Bq) (#)  1 29 4.9% -14000 1 -223 4000 59 5.3% 2 105 17.9% -12000 0 -191 8000 510 45.5% 3 93 15.8% -10000 1 -159 12000 213 19.0% 4 98 16.7% -8000 1 -127 16000 97 8.6% 5 111 18.9% -6000 4 -95 20000 52 4.6% 6 77 13.1% -4000 9 -64 24000 44 3.9%	
1-GATE SORTS	
DETECTR SORTS FREQX (Bq) (#) (Bq/kg) (Bq) (#)  1 29 4.9% -14000 1 -223 4000 59 5.3% 2 105 17.9% -12000 0 -191 8000 510 45.5% 3 93 15.8% -10000 1 -159 12000 213 19.0% 4 98 16.7% -8000 1 -127 16000 97 8.6% 5 111 18.9% -6000 4 -95 20000 52 4.6% 6 77 13.1% -4000 9 -64 24000 44 3.9%	
DETECTR         SORTS         FREQX         (Bq)         (#) (Bq/kg)         (Bq)         (#)           1         29         4.9% -14000         1         -223         4000         59         5.3%           2         105         17.9% -12000         0         -191         8000         510         45.5%           3         93         15.8% -10000         1         -159         12000         213         19.0%           4         98         16.7% -8000         1         -127         16000         97         8.6%           5         111         18.9% -6000         4         -95         20000         52         4.6%           6         77         13.1% -4000         9         -64         24000         44         3.9%	ACT_P
2 105 17.9% -12000 0 -191 8000 510 45.5% 3 93 15.8% -10000 1 -159 12000 213 19.0% 4 98 16.7% -8000 1 -127 16000 97 8.6% 5 111 18.9% -6000 4 -95 20000 52 4.6% 6 77 13.1% -4000 9 -64 24000 44 3.9%	(kBq)
2 105 17.9% -12000 0 -191 8000 510 45.5% 3 93 15.8% -10000 1 -159 12000 213 19.0% 4 98 16.7% -8000 1 -127 16000 97 8.6% 5 111 18.9% -6000 4 -95 20000 52 4.6% 6 77 13.1% -4000 9 -64 24000 44 3.9%	4
3 93 15.8% -10000 1 -159 12000 213 19.0% 4 98 16.7% -8000 1 -127 16000 97 8.6% 5 111 18.9% -6000 4 -95 20000 52 4.6% 6 77 13.1% -4000 9 -64 24000 44 3.9%	8
4 98 16.7% -8000 1 -127 16000 97 8.6% 5 111 18.9% -6000 4 -95 20000 52 4.6% 6 77 13.1% -4000 9 -64 24000 44 3.9%	12
5 111 18.9% -6000 4 -95 20000 52 4.6% 6 77 13.1% -4000 9 -64 24000 44 3.9%	16
6 77 13.1% -4000 9 -64 24000 44 3.9%	20
0 11 13.14 4000 7	24
7 50 10.0% -2000 27 -32 2000 23 2:0%	28
7 37 10.00 2000 2. 27	32
7/000 0 09	36
101RE 300 2000 200	40
77 (1000 9 0.7V	44
2-date suris 334 000 105 407 (9000 0 0.89)	48
DETECTION SOUTH THE STATE OF TH	52
7,000	56
7 33 (0000 2 0.27	60
10 07 10.17 14000 2.	64
70 10:00 10:00 10 00:00 10 00:00 10 0.4%	68
77000 / 0/9	72
7/000 3 0.29	76
7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	80
15 41 1110 2110 2 117	84
101/12 334 20000 0 110	>84
>28000 0 0 >84000 29 2.6% TOTAL 1308 TOTAL 1122	704
10112	
SUMMARY TOTALS  HOT PARTICLE EVENTS 1140 SORTS BY ONE GATE ONLY 588	
NOT PARTICLE EVENTS 1140	
MOLITERATION SOCIETY STATES	
DISTRIBUTED EVENTS 0	

#### REC CODE EXPLANATION

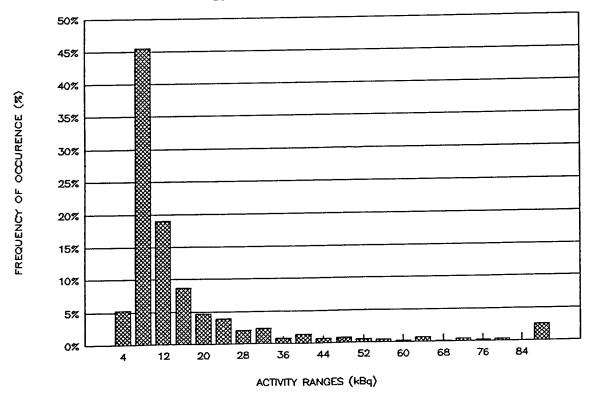
1.00 Source check (Soil on belt)

2.00 Empty belt

SORTER 2 LOG DATA FOR 01-May-93



JA SOIL CLEANUP PLANT HOT PARTICLES
SORTER 2 LOG DATA FOR 01-Moy-93



A-82

AVERAGE BACKGROUND COUNT RATE  SORTER SOIL DENSITY  1.55 tons/m²  CROUND SOIL DENSITY  ANSS TOTAL  MAXIMM/SORT  MINIMM/SORT  MINIMM/SORT  MINIMM/SORT  MINIMM/SORT  MEIGHT RECOVERY OR VOLUME RECOVERY  EQUIVALENT SOIL-IN-GROUND  PARTICLE ACTIVITY (MAXIMM ESTIMATE)  TOTAL  MAXIMM/SORT  MINIMM/SORT  MORK DAY STRAT  MORK DAY ST	SORTER 1 30-Apr-93				
SCRETCE SOIL DEASITY   1.55 tons/m²   CONTAMINATED   CLEAN	AVERAGE BACKGROUND COUNT RATE	0.81 ± 0.04	4 c/sec		
CONTAININATED   CLEAM   CLEA		1.35 tons/m³			
MAST STOTAL  MAXIMAM/SORT  MINIMAM/SORT  MINIMAM/SORT  MINIMAM/SORT  MINIMAM/SORT  MINIMAM/SORT  MINIMAM/SORT  MINIMAM/SORT  MEGHIT RECOVERY O'COLUME RECOVERY  EQUIVALENT SOIL-IN-GROUND  PARTICLE ACTIVITY (MAXIMUM ESTIMATE)  TOTAL  TOTAL  MINIMAM/SORT  MINIMAM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMAM/SORT  MINIMAM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK MISTORY  MORK DAY START  MORK AT START  MORK START  MORK START  MORK START  MORK MOURS  MINIMAM/SORT  START SOIL- PROCESSING  MORK MOURS  MAXIMAM/SORS  MINIMAM/SORT  MORK HOURS  MORK HOURS  MAXIMAM/SOR  MORK HOURS  MAXIMAM/SOR  MORK HOURS  MAXIMAM/SOR  MORK HOURS  MAXIMAM/SOR  MORK MOURS  MAXIMAM/SOR  MORK MOURS  MAXIMAM/SOR  MORK MOURS  MORK MORK MOURS  M		1.65 tons/m <sup>3</sup>			
MAXIMM/SORT MINIMM/SORT MOKE ADATICLE (REALISTIC ESTIMATE) ACTIVITY MOKE MINIMM/SORT MOKE ADATICLE (REALISTIC ESTIMATE) ACTIVITY MOKE MINIMM/SORT MOKE ADATICLE (REALISTIC ESTIMATE) ACTIVITY MOKE ADATICLE (REALISTIC ESTIMATE) MOK			CONTAMINATED	CLEAN	
MAXIMM/SORT   8.6 kg   54.2 kg   54.3 kg   54.2 kg   54.3 kg   54.2 kg   54.3 kg   54.	MASS TOTAL		1.36 tons	116.4 tons	
MINIMUM/SORT 0.8 kg 54.2 kg  WEIGHT RECOVERY OR VOLUME RECOVERY EQUIVALENT SOIL-IN-GROUND 1.08 yd¹ 92.3 yd² 93.3 yd²/day  PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL MAXIMUM/SORT 3,867 kg 2.3 kg  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY 9,465 kBq 7,392 kBq MAXIMUM/SORT 2236 kBq 16 kBq MAXIMUM/SORT 0.6 yd² - 6 kBq MAXIMUM/SORT 1.130 AM PLANT SMUT-DOMN 0.5:30 PM PLANT START 0.6 yd² AM PLANT SMUT-DOMN 0.5:30 PM START SOIL PROCESSING 0.6:32 AM END SOIL PROCESSING 0.0 hr START SOIL PROCESSING 0.6:32 AM END SOIL PROCESSING 0.0 hr AVAILABLE ROURS 11.5 hr AVAILABLE ROURS 11.5 hr AVAILABLE ROURS 11.5 hr TOTAL SYSTEM PAUSE 0.00 hr PLANT SYSTEM PAUSE 0.00 hr START-UP 0.05 hr PLANT SYSTEM PAUSE 0.00 hr START-UP 0.05 hr PLANT PROCESSING 0.00 hr START-UP 0.05 hr PLANT SMUT-DONN 0.05			8.6 kg	62.9 kg	
MATTER   MAXIMUM   STIMATE   TOTAL   START   OG:00 AM   MORK DAY START   Of:00 AM   START   OG:00 AM   OG:00			0.8 kg	54.2 kg	
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)					
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)  TOTAL  NAXIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  MAXIMUM/SORT  MAXIMUM/SORT  MAXIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  MAXIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY START  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK BAY END  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  PARTICLE (REALISTIC ESTIMATE) ACTIVITY  PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY START  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY START  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY START  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY START  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY START  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY START  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY START  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY START  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY START  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY START  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY START  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY BAY DISPERSED ACTIVITY  MORK DAY BAY DAY	WEIGHT RECOVERY OR VOLUME RECOVERY	1			
TOTAL  MAXIMM/SORT  HINIMM/SORT  NAXIMM/SORT  NAXIMM/SORT  MAXIMM/SORT  MAXIMM/SORT  MAXIMM/SORT  MAXIMM/SORT  MAXIMM/SORT  MAXIMM/SORT  MORK PARTICLE (REALISTIC ESTIMATE) ACTIVITY  9,465 k8q 7,392 k8q 16 k8q 17 k8q 18 k8q 18 k8q 19 k8q 10 k9q 10 k8q 10 k9q 11	EQUIVALENT SOIL-IN-GROUND		1.08 yd <sup>3</sup>	92.3 yd³	93.3 yd,/day
TOTAL  MAXIMM/SORT  HINIMM/SORT  NINIMM/SORT  MAXIMM/SORT  MAXIMM/SORT  MAXIMM/SORT  MAXIMM/SORT  MAXIMM/SORT  MAXIMM/SORT  MAXIMM/SORT  MORK PARTICLE (REALISTIC ESTIMATE) ACTIVITY  9,465 kBq 7,392 kBq 16	DADTICLE ACTIVITY (MAYIMIM ESTIMA)	(E)			
MAXIMUM/SORT   3,867 kBq   2.3 kBq   2.4 kBq   2.3 kBq		. <b>- 2</b>	31,331 kBq		
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY	•		3,867 kBq		
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  HINIMUM/SORT  SPECIFIC ACTIVITY  MORK DAY START  MORK DAY END  MORK DA			2.3 kBq		
MAXIMUM/SORT SPECIFIC ACTIVITY  MORK MISTORY  MORK MISTORY  MORK DAY START OG:00 AM PLANT SHUT-DOWN START SOIL PROCESSING UINCH START MORK DAY START MORK DOWN START SOIL PROCESSING MORK HOURS					
MINIMUM/SORT   0 Bq	DISPERSED + PARTICLE (REALISTIC ES	STIMATE) ACTIVITY			
### SPECIFIC ACTIVITY    MORK DAY START   06:00 AM	MAXIMUM/SORT		•		
MORK DAY START	MINIMUM/SORT		•	•	_
MORK DAY START   06:00 AM	SPECIFIC ACTIVITY		6,952 Bq/kg	64 BQ/KS	
MORK DAY START   06:00 AM	WORK HISTORY	·			
PLANT START-UP 06:00 AM PLANT SHUT-DOWN 05:30 PM START SOIL PROCESSING 06:32 AM END SOIL PROCESSING 04:56 PM LUNCH START 11:30 AM LUNCH PERIOD 0.0 hr  WORK HOURS 111.5 hr  AVAILABLE HOURS 11.5 hr  ACTUAL PROCESS HOURS (total 20-sec records) 10.40 hr  DOWN-TIME 1.10 hr  TOTAL SYSTEM PAUSE 0.00 hr  NONAVAILABLE HOURS 0.0 hr  SHART-UP 0.54 hr  SHUT-DOWN 0.56 hr  PLANT PERFORMANCE 90.4%  PRODUCTIVITY 90.4%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 3,154  NONPROCESS RECORDS (7-est, calibration, etc) 5  TOTAL SORT 0.000 & MND=0  NO SORT 1,114 AD=0 & MD=0 & MND>0  TOTAL SORT 1,114 AD=0 & MD=0 & MND>0  TOTAL SORT 1,114 AD=0 & MD=0 & MND>0  TOTAL SORT 1,114 AD=0 & MD=0 & MND>0  AD=0 & MD 1  AD=0 & MD 1  AD=0 & MD 1  LUNEXPLAINED RECORDS 11,114 AD=0 & MD=0 TIME TIME TIME TIME TIME TIME TIME TIME		06:00 AM	WORK DAY END	05:30 PM	
LUNCH START   11:30 AM   LUNCH PERIOD   0.0 hr		06:00 AM	PLANT SHUT-DOWN	05:30 PM	
MORK HOURS	START SOIL PROCESSING	06:32 AM	END SOIL PROCESSING	04:56 PM	
AVAILABLE HOURS  ACTUAL PROCESS HOURS (total 20-sec records)  DOWN-TIME  TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0-AD<1 kbq & MD>0  11.5 hr  10.40	LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr	
AVAILABLE HOURS  ACTUAL PROCESS HOURS (total 20-sec records)  DOWN-TIME  TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0-AD<1 kbq & MD>0  11.5 hr  10.40	THOSE MOUSE		11.5 hr		
ACTUAL PROCESS HOURS (total 20-sec records)  DOWN-TIME  TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0-4D<-1kBq & MD>0  1 11					
DOWN-TIME   1.10 hr   TOTAL SYSTEM PAUSE   0.00 hr   NONAVAILABLE HOURS   0.00 hr     0.54 hr     0.55 hr     90.4%       90.4%     90		IRS (total 20-sec records)	10.40 hr		
TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  1,114 AD=0 & MD=0 & MND=0  NO SORT  SOME SORT  UNEXPLAINED RECORDS  1  AD=0 & MD 0  UNEXPLAIN PAUSE  AD=0 & MD 0  12:20:41  NO NO 1  NO NO 1  NO 11:40554/14			1.10 hr		
NONAVAILABLE HOURS   0.0 hr		E	0.00 hr		
START-UP SHUT-DOWN O.56 hr PLANT PERFORMANCE PRODUCTIVITY 90.4%  90.4%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 3,154  NONPROCESS RECORDS (Test, calibration, etc) 20-SEC PROCESS RECORDS 1,872  TOTAL SORT 0 MD>0 & MND=0  1,114 AD=0 & MD=0 & MND>0  SOME SORT UNEXPLAINED RECORDS 1 AD=0 & MD 1 AD=0 & MD 1 TIME TIME TIME AD<0 & MD 0  12:20:41 None			0.0 hr		
SHUT-DOWN PLANT PERFORMANCE PRODUCTIVITY 90.4%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT NO SORT NO SORT SOME SORT UNEXPLAINED RECORDS  0 <ad<1kbq &="" md="">0 1 1.114 AD=0 &amp; MD=0 &amp; MND=0 1.114 AD=0 &amp; MD=0 &amp; MD=0 &amp; MD=0 &amp; MD=0 &amp; MD=0 1.114 AD=0 &amp; MD=0 &amp; MD=0 &amp; MD=0 &amp; MD=0 &amp; MD=0 1.114 AD=0 &amp; MD=0 &amp; MD=0</ad<1kbq>			0.54 hr		
PRODUCTIVITY  90.4%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  3,154  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 <ad<1kbq &="" md="">0  1,114 AD=0 &amp; MD=0 &amp; MND=0  1,114 AD=0 &amp; MD=0 &amp; MND&gt;0  TOTAL SORT  UNEXPLAINED RECORDS  1  UNEXPLAIN PAUSE  AD=0 &amp; MD  1  TIME  TIME  TIME  TIME  12:20:41 None</ad<1kbq>			0.56 hr		
TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0-AD-0 & MD-0 & MD-0 & MND-0  1,114 AD-0 & MD-0 & MND-0  757 AD-0&0-MD-MNDmax&MND-MNDmax  UNEXPLAINED RECORDS  0-AD-1kBq & MD-0	PLANT PERFORMANCE		90.4%		
NONPROCESS RECORDS (Test, calibration, etc)   5     20-SEC PROCESS RECORDS   1,872     0 MD>0 & MND=0     1,114 AD=0 & MD=0 & MND>0     NO SORT   1,114 AD=0 & MD=0 & MND>0     NO SORT   1,114 AD=0 & MD=0 & MND>0     AD=0 & MD=0 & MND>0     NONE NONE NOTE NOTE NOTE NOTE NOTE NOTE	PRODUCTIVITY		90.4%		
NONPROCESS RECORDS (Test, calibration, etc)   5     20-SEC PROCESS RECORDS   1,872     0 MD>0 & MND=0     1,114 AD=0 & MD=0 & MND>0     NO SORT   1,114 AD=0 & MD=0 & MND>0     NO SORT   1,114 AD=0 & MD=0 & MND>0     AD=0 & MD=0 & MND>0     NONE NONE NOTE NOTE NOTE NOTE NOTE NOTE	TOTAL COLL PROCESSING RECORDS /2-	SEC and 20-SEC)	3.154		
1,872     1,872     1,872     1,872     1,872     1,872     1,114   1,972     1,972					
TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 <ad<1kbq &="" md="">0  1  AD&lt;0 &amp; MD  1  UNEXPLAIN  1  1  1  1  1  1  1  1  1  1  1  1  1</ad<1kbq>		tron, cre,	1,872		
NO SORT 1,114 AD=0 & MD=0 & MND>0  SOME SORT 757 AD>0&0 <md<mndmax&mnd<mndmax &="" 0="" 1="" 12:20:41="" ad="0" ad<0="" md="" none<="" pause="" records="" td="" unexplain="" unexplained=""><td></td><td></td><td></td><td></td><td></td></md<mndmax&mnd<mndmax>					
SOME SORT 757 AD>0&0 <md<mndmax&mnd<mndmax &="" 0<ad<1kbq="" 1="" md="" records="" unexplained="">0 1 UNEXPLAIN PAUSE  AD=0 &amp; MD 1 TIME TIME  AD&lt;0 &amp; MD 0 12:20:41 None</md<mndmax&mnd<mndmax>					
UNEXPLAINED RECORDS  0 <ad<1kbq &="" md="">0</ad<1kbq>			757 AD>0&0 <md<mni< td=""><td>Omax&amp;MND <mndmax< td=""><td></td></mndmax<></td></md<mni<>	Omax&MND <mndmax< td=""><td></td></mndmax<>	
0 <ad<1kbq &="" md="">0 1 UNEXPLAIN PAUSE  AD=0 &amp; MD 1 TIME TIME  AD&lt;0 &amp; MD 0 12:20:41 None</ad<1kbq>		DS	1		
AD=0 & MD 1 TIME TIME AD<0 & MD 0 12:20:41 None				UNEXPLAIN	PAUSE
AD<0 & MD 0 12:20:41 None	•	MD 1		TIME	TIME
ACT_P <5 kBq 242 18.9% 16:05:41	AD<0 &	MD 0		12:20:41	None
	ACT_P <5 kBq	242 18.9%		16:05:41	

•	2-SEC COUNT PERIODS					18,720					
2-	SEC CO	2-SEC RECORDS	S 11111 SC	WTS.			(ACT_P	>0 kBq)			
		2-SEC RECORDS			IN >1 DE	-	_				
			DETECTOR		280		84.3%				
			DETECTOR		41		12.3%				
			DETECTOR		9		2.7%				
			DETECTOR		2		0.6%				
			DETECTOR		0		0.0%				
		_	DETECTOR		0		0.0%				
			DETECTOR		0		0.0%				
			OTAL			332					
		NET 2-SEC RE		TH SORTS		950					
		2-SEC PERIOD				17,770					
		AVG TIME BET				39.4					
		A44 TINE DET	# =								
4 0475 6/	DOTE	641	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
1-GATE SO	SORTS		(Bq)		(Bq/kg)			(Bq)	(#)		(kBq)
DETECTR	SUKIS	FREE	(54)		τ-φ-σ-						
1	9	1.4%	-14000	0	-223			4000	91	7.1%	4
2	42		-12000	2	-191			8000	541	42.2%	8
3	73		-10000	0	-159			12000	236	18.4%	12
4	115		-8000	0	-127			16000	112	8.7%	16
5	137		-6000	0	-95			20000	55	4.3%	20
6	109		-4000	18	-64			24000	36	2.8%	24
7	118		-2000	51	-32			28000	34	2.7%	28
8	38		0	161	0			32000	28	2.2%	32
TOTAL	641	2	2000	311	32			36000	16	1.2%	36
TOTAL	041		4000	430	64			40000	13	1.0%	40
2-GATE S	no te	641	6000	406	95			44000	13	1.0%	44
DETECTR	SORTS		8000	279	127			48000	8	0.6%	48
DETECTA 8	30113	I KEEA	10000	138	159			52000	10	0.8%	52
9	24	3.7%	12000	62	191			56000	7	0.5%	56
	58		14000	14	223			60000	5	0.4%	60
10			16000	5	254			64000	5	0.4%	64
11	92 132		18000	0	286			68000	12	0.9%	68
12			20000	0	318			72000	8	0.6%	72
13	142		22000	0	350			76000	2	0.2%	76
14	97	15.1%	22000		707			80000	1	0.1%	80

SUMMARY TOTALS

15

TOTAL

HOT PARTICLE EVENTS 1308 SORTS BY ONE GATE ONLY 641
MULTIPARTICLE EVENTS 408 SORTS BY TWO GATES 641
DISTRIBUTED EVENTS 0

0

0

1877

382

413

0

#### REC CODE EXPLANATION

96

641

1.00 Source check (Soil on belt)

15.0% 24000

26000

>28000

TOTAL

- 2.00 Empty belt
- 3.00 Test (No process soil)

80

84

>84

1 0.1%

45

1282

0.3%

3.5%

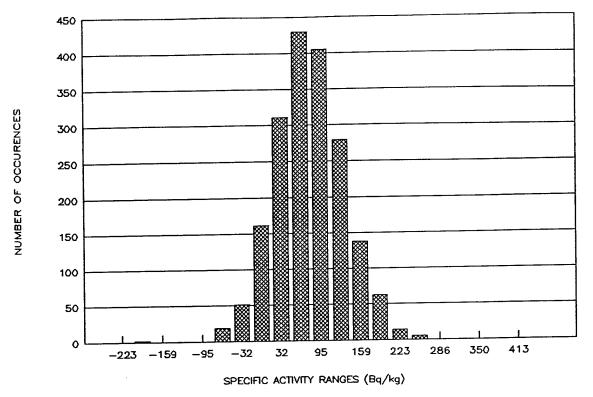
80000

84000

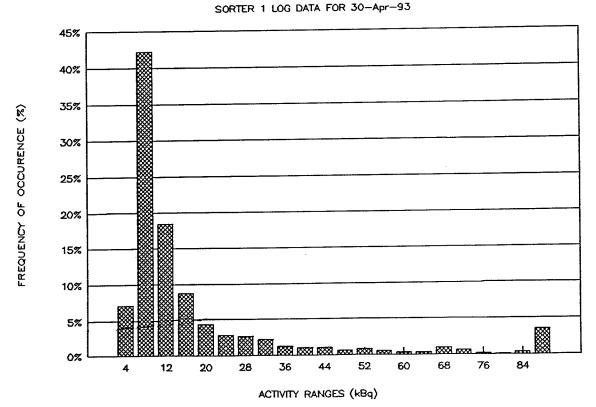
>84000

TOTAL

SORTER 1 LOG DATA FOR 30-Apr-93



# JA SOIL CLEANUP PLANT HOT PARTICLES



A-85

SORTER 2 30-Apr-93				
AVERAGE BACKGROUND COUNT RATE	0.86 ± 0.05	c/sec		
SORTER SOIL DENSITY	1.35 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³			
		CONTAMINATED	CLEAN	
MASS TOTAL		1.26 tons	116.4 tons	
MAXIMUM/SORT		8.6 kg	62.9 kg	
MINIMUM/SORT		0.8 kg	54.2 kg	
				98.9%
WEIGHT RECOVERY OR VOLUME RECOVERY		الس 4 00 t	92.3 yd³	93.3 yd3/day
EQUIVALENT SOIL-IN-GROUND		1.00 yd <sup>3</sup>	,2.5 ,2	, , ,
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	)	36,462 kBq		
TOTAL		4,367 kBq		
MAXIMUM/SORT		3.0 kBq		
MINIMUM/SORT				
DISPERSED + PARTICLE (REALISTIC EST	TMATE) ACTIVITY	11,266 kBq	6,140 kBq	
	Trante, notities	2555 kBq	16 kBq	
MAXIMUM/SORT		0 Bq	-19 kBq	
MINIMUM/SORT  SPECIFIC ACTIVITY		8,952 Bq/kg	53 Bq/kg	
SPECIFIC ACTIVITY				
WORK HISTORY				
WORK DAY START	06:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	06:00 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:32 AM	END SOIL PROCESSING		
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr	
		41 E ha		
WORK HOURS		11.5 hr 11.5 hr		
AVAILABLE HOURS		10.39 hr		
ACTUAL PROCESS HOU	RS (total 20-sec records)	1.11 hr		
DOWN-TIME		0.00 hr		
TOTAL SYSTEM PAUSE		0.0 hr		
NONAVAILABLE HOURS		0.54 hr		
START-UP		0.56 hr		
SHUT-DOWN		90.4%		
PLANT PERFORMANCE		90.4%		
PRODUCTIVITY				
TOTAL SOIL PROCESSING RECORDS (2-S	EC and 20-SEC)	3,039		
NONPROCESS RECORDS (Test, calibrat		6		
20-SEC PROCESS RECORDS	•	1,871		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		1,114 AD=0 & MD=0 8		
SOME SORT		757 AD>0&0 <md<mni< td=""><td>)max&amp;MND<mndmax< td=""><td></td></mndmax<></td></md<mni<>	)max&MND <mndmax< td=""><td></td></mndmax<>	
UNEXPLAINED RECORD	s	0		DALICE
0 <ad<1kbq &="" md="">0</ad<1kbq>	3		UNEXPLAIN	PAUSE
AD=0 &	<b>К</b> D 0		TIME	TIME
AD<0 &			10:05:22	None
ACT_P <5 kBq	191 16.4%		10:35:42	

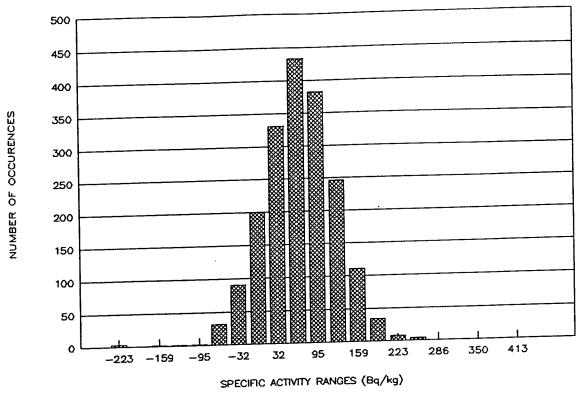
2	2-SEC COUNT PERIODS			1	8,710				15	:16:02	
2.		-SEC RECORDS		ρτς			(ACT P	>0 kBq)			
		-SEC RECORDS					_	•			
	~		DETECTOR		218		85.8%				
			DETECTOR		29		11.4%				
			DETECTOR		5		2.0%				
		-			2		0.8%				
			DETECTOR		0		0.0%				
			DETECTOR		0		0.0%				
			DETECTOR		0		0.0%				
			DETECTOR	3	·	254	0.00				
			DTAL	u conte		914					
		IET 2-SEC REC				7,796 17,796					
		-SEC PERIODS				40.9					
	•	VG TIME BET	MEEN 2-20	C SURTS		40.7	300				
1-GATE S	OPTS	620	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)		(Bq/kg)			(Bq)	(#)		(kBq)
DETECTA	30113	111241	1-4		•						
1	22	3.5%	-14000	3	-223			4000	49	4.2%	4
2	91	14.7%	-12000	0	-191			8000	541	46.3%	8
3	96	15.5%	-10000	1	-159			12000	212	18.2%	12
4		21.3%	-8000	1	-127			16000	100	8.6%	16
5	116	18.7%	-6000	1	-95			20000	61	5.2%	20
6	96	15.5%	-4000	31	-64			24000	45	3.9%	24
7	55	8.9%	-2000	91	-32			28000	31	2.7%	28
8	12	1.9%	0	200	0			32000	16	1.4%	32
TOTAL	620		2000	331	32			36000	16	1.4%	36
TOTAL			4000	433	64			40000	9	0.8%	40
2-GATE	SORTS	548	6000	382	95			44000	15	1.3%	44
DETECTR	SORTS	FREQ%	8000	246	127			48000	2	0.2%	48
8	•••••		10000	111	159			52000	7	0.6%	52
9	46	8.4%	12000	34	191			56000	3	0.3%	56
10	72	13.1%	14000	8	223			60000	6	0.5%	60
11	101	18.4%	16000	4	254			64000	9		64
12	130	23.7%	18000	0	286			68000	3		68
13	88	16.1%	20000	0	318			72000	1		72
14	84	15.3%	22000	0	350			76000	4		76
15	27	4.9%	24000	0	382			80000	5	0.4%	80
TOTAL	548		26000	0	413			84000	2	0.2%	84
			>28000	0	0			>84000	31	2.7%	>84
			TOTAL	1877	,			TOTAL	1168		
SUMMARY	TOTALS										
	HOT PARTI	CLE EVENTS	1173		SORTS B	Y ONE	GATE ON	LY	620		
		ICLE EVENTS	412		SORTS B	Y TWO	GATES		548		
		ED EVENTS	0								

#### REC CODE EXPLANATION

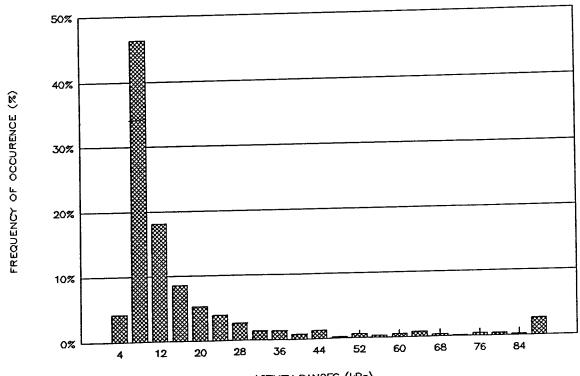
1.00 Source check (Soil on belt)

2.00 Empty belt

SORTER 2 LOG DATA FOR 30-Apr-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 30-Apr-93



ACTIVITY RANGES (kBq)

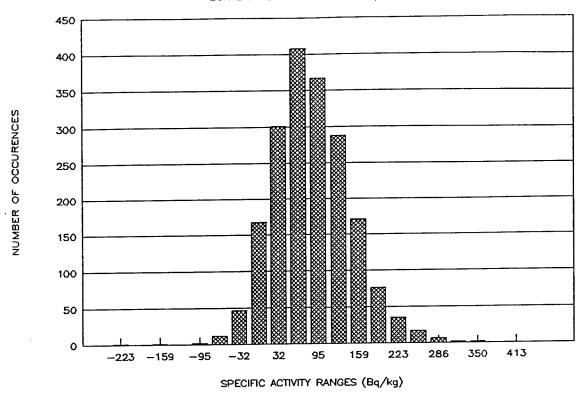
SORTER 1 29-Apr-93				
AVERAGE BACKGROUND COUNT RATE	0.80 ± 6	0.01 c/sec		
SORTER SOIL DENSITY	1.35 tons/m <sup>3</sup>			
GROUND SOIL DENSITY	1.65 tons/m³			
		CONTAMINATED	CLEAN	
MASS TOTAL		1.40 tons	117.9 tons	
MAXIMUM/SORT		8.6 kg	62.9 kg	
MINIMUM/SORT		0.8 kg	54.2 kg	
				98.8%
WEIGHT RECOVERY OR VOLUME RECOVER	Y	1.11 yd³	93.5 yd³	94.6 yd3/day
EQUIVALENT SOIL-IN-GROUND		1.11 74	,,,,,	, , , , , ,
PARTICLE ACTIVITY (MAXIMUM ESTIMA	TE)			
TOTAL		26,851 kBq		
MAXIMUM/SORT	•	1,133 kBq		
MINIMUM/SORT		2.6 kBq		
DISPERSED + PARTICLE (REALISTIC E	STIMATE) ACTIVITY	8,455 kBq	8,323 kBq	
MAXIMUM/SORT	STIPMIE, NOTTO	561 kBq	21 kBq	
MINIMUM/SORT		0 Bq	-6 kBq	
SPECIFIC ACTIVITY		6,041 Ba/kg	71 Bq/ks	)
SPECIFIC ACTIVITY		• • •		
WORK HISTORY			45 70 74	
WORK DAY START	06:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	06:00 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:26 AM	END SOIL PROCESSING		
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr	
WORK HOURS		11.5 hr		
AVAILABLE HOURS		11.5 hr		
ACTUAL PROCESS HO	OURS (total 20-sec records)	10.54 hr		
DOWN-TIME		0.96 hr		
TOTAL SYSTEM PAUS	SE .	0.00 hr		
NONAVAILABLE HOUF	ls .	0.0 hr		
START-UP		0.44 hr		
SHUT-DOWN		0.52 hr		•
PLANT PERFORMANCI	•	91.6%		
PRODUCTIVITY		91.6%		
TOTAL SOIL PROCESSING RECORDS (2	SEC and 20-SEC)	3,269		
NONPROCESS RECORDS (Test, calibra		5		
20-SEC PROCESS RECORDS		1,897		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		1,119 AD=0 & MD=0	& MND>0	
SOME SORT		778 AD>0&0 <md<mn< td=""><td></td><td></td></md<mn<>		
UNEXPLAINED RECO	RDS	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	4		UNEXPLAIN	PAUSE
AD=0	k MD 0		TIME	TIME
AD<0	R MD 0		07:07:52	None
ACT_P <5 kBq	275 20.0%		07:30:12	

	2-SEC COUNT PERIODS				18,970				11:02:52		
	_ 020 00	2-SEC RECORD	S WITH S	ORTS		1,372	(ACT_P	>0 kBq)		1	1:22:12
		2-SEC RECORD			IN >1 DE		_				
			DETECTO		294		81.7%				
			DETECTO		55		15.3%				
			DETECTO		10		2.8%				
			DETECTO		1		0.3%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
		_	OTAL			360					
		NET 2-SEC RE		TH SORTS		1,012					
		2-SEC PERIOD				17,958					
		AVG TIME BET				37.5	sec				
		AVG TIME DET	#CC# C 0								
1-GATE	SORTS	681	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
DETECT		FREQ%	_ (Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)
5212511			•								
1	15	2.2%	-14000	1	-223			4000	69	5.0%	4
2	49	7.2%	-12000	0	-191			8000	647	47.2%	8
3	102	15.0%	-10000	1	-159			12000	234	17.1%	12
4	120	17.6%	-8000	0	-127			16000	105	7.7%	16
5	137		-6000	2	-95			20000	69	5.0%	20
6	99	14.5%	-4000	11	-64			24000	52	3.8%	24
7	115	16.9%	-2000	46	-32			28000	28	2.0%	28
8	44	6.5%	0	168	0			32000	22	1.6%	32
TOTAL	681		2000	301	32			36000	21	1.5%	36
			4000	408	64			40000	18	1.3%	40
2-GATE	SORTS	691	6000	367	95			44000	12	0.9%	44
DETECT		FREQ%	8000	288	127			48000	14	1.0%	48
8			10000	171	159			52000	6	0.4%	52
9	27	3.9%	12000	76	191			56000	4	0.3%	56
10	72	10.4%	14000	35	223			60000	7	0.5%	60
11	126	18.2%	16000	17	254			64000	5	0.4%	64
12	137	19.8%	18000	6	286			68000	6	0.4%	68
13	127	18.4%	20000	2	318			72000	5	0.4%	72
14	115	16.6%	22000	2	350			76000	3	0.2%	76
15	87	12.6%	24000	0	382			80000	2		80
TOTAL	691		26000	0	413			84000	2	0.1%	84
			>28000	0	0		>	84000	41	3.0%	>84
			TOTAL	1902				TOTAL	1372		
SUMMARY	TOTALS										
	HOT PART	ICLE EVENTS	1392		SORTS BY			Y	681		
	MULTIPAR	TICLE EVENTS	373		SORTS BY	TWO GA	ATES		691		
	DISTRIBU	TED EVENTS	0								

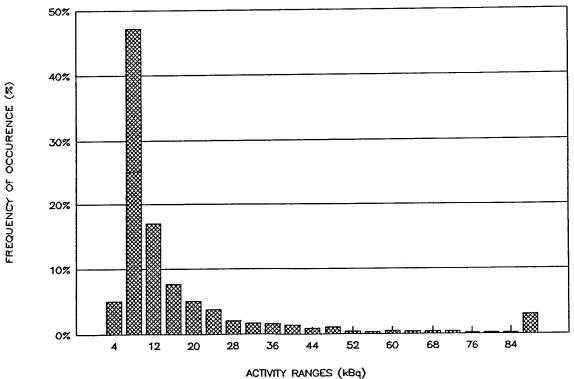
#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 1 LOG DATA FOR 29-Apr-93



## JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 29-Apr-93



	29-Apr-93							
SORTER 2	53-Whi -33							
AVERAGE BACKGR	OUND COUNT RATE		0.86			c/sec		
SORTER SOIL DEI	YSITY			tons/				
GROUND SOIL DE	NSITY		1.65	tons/	n,	CONTAMINATED	CLEAN	
						1.25 tons	118.1 tons	
MASS TOTAL						8.6 kg	62.9 kg	
MAXIMUM,						0.8 kg	54.2 kg	
MINIMUM	/SORT					0.0 (3		
	Y OR VOLUME RECOVERY							98.9%
WEIGHT RECOVER						0.99 yd3	93.6 yd <sup>3</sup>	94.6 yd3/da
EGOTANTENT 201	L-14-drooup							
PARTICLE ACTIV	ITY (MAXIMUM ESTIMATE	)				aa a/4 Lp-		
TOTAL						22,861 kBq		
MAXIMUM	/SORT					1,264 kBq		
MINIMUM						2.5 kBq		
			T			7,366 kBq	6,773 kBq	
	RTICLE (REALISTIC EST	IMAIE) ACII	4 1 1 1 V			688 kBq	19 kBq	
MAXIMUM						0 Bq	-9 kBq	
MINIMUM						5,870 Bq/kg	57 Bq/kg	
SPECIFI	C ACTIVITY						·.	
WORK HISTORY							-5 70 84	
	Y START	06:00 AM				WORK DAY END	05:30 PM	
	START-UP	06:00 AM				PLANT SHUT-DOWN	05:30 PM	
	SOIL PROCESSING	06:26 AM				END SOIL PROCESSI	4G 04:38 PM 0.0 hr	
LUNCH S		11:30 AM				LUNCH PERIOD	Q.O M	
						11.5 hr		
	WORK HOURS					11.5 hr		
	AVAILABLE HOURS ACTUAL PROCESS HOUR	c (total 20	l-sec	records	s)	10.54 hr		
		S (total 20	- 366	,		0.96 hr		
	DOWN-TIME					0.00 hr		
	TOTAL SYSTEM PAUSE NONAVAILABLE HOURS					0.0 hr		
						0.44 hr		
	START-UP					0.52 hr		
	SHUT-DOWN PLANT PERFORMANCE					91.6%		
	PRODUCTIVITY					91.6%		
						3,098		
	OCESSING RECORDS (2-S	C and 20-Si	EC)			5,078		
TOTAL SOIL PR	corps (Test, calibrat	ion, etc)				1,897		
NONPROCESS RE						0 MD>0 % MN0	)= <b>0</b>	
NONPROCESS RE	PROCESS RECORDS						-	
NONPROCESS RE	PROCESS RECORDS TOTAL SORT							
NONPROCESS RE	PROCESS RECORDS					1,165 AD=0 & MD=	0 & MND>0	
NONPROCESS RE	PROCESS RECORDS TOTAL SORT NO SORT SOME SORT					1,165 AD=0 & MD= 732 AD>0&0 <md<< td=""><td></td><td></td></md<<>		
NONPROCESS RE	PROCESS RECORDS TOTAL SORT NO SORT SOME SORT UNEXPLAINED RECORD					1,165 AD=0 & MD=	0 & MND>0	PAUSE
NONPROCESS RE	PROCESS RECORDS TOTAL SORT NO SORT SOME SORT UNEXPLAINED RECORD 0 <ad<1kbq &="" md="">0</ad<1kbq>	5				1,165 AD=0 & MD= 732 AD>0&0 <md<< td=""><td>:0 &amp; MND&gt;0 :MDM&amp;xemDMMXxemDMMX</td><td></td></md<<>	:0 & MND>0 :MDM&xemDMMXxemDMMX	
NONPROCESS RE	PROCESS RECORDS TOTAL SORT NO SORT SOME SORT UNEXPLAINED RECORD	5 MD 0				1,165 AD=0 & MD= 732 AD>0&0 <md<< td=""><td>O &amp; MND&gt;0 &amp; MND&gt;0.  CMNDmax&amp;MND&lt; CMNDmax  CMNDmax  CMNDmax  CMNDmax</td><td>PAUSE</td></md<<>	O & MND>0 & MND>0.  CMNDmax&MND< CMNDmax  CMNDmax  CMNDmax  CMNDmax	PAUSE

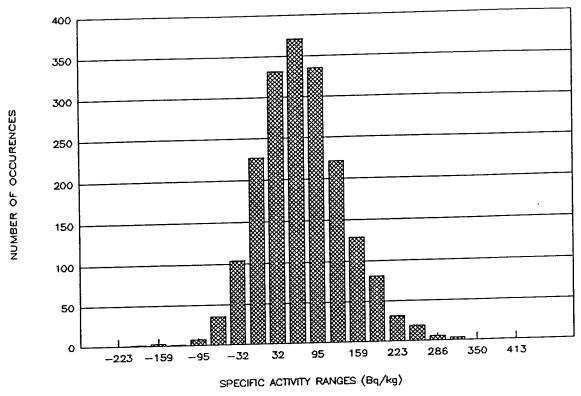
2	-sec con	INT PERIODS			1	8,970				08	3:28:52
-		2-SEC RECORDS	S WITH SO	RTS			(ACT_P	>0 kBq)		10	:46:32
		2-SEC RECORDS				-				16	:58:32
			DETECTOR		242		80.9%				
		_	DETECTOR		49		16.4%				
			DETECTOR		8		2.7%				
		5	DETECTOR	s	0		0.0%				
		6	DETECTOR	s	0		0.0%				
		7	DETECTOR	S	0		0.0%				
		8	DETECTOR	s	0		0.0%				
		Ţ	OTAL.			299					
		NET 2-SEC RE	CORDS WIT	H SORTS		902					
		2-SEC PERIOD	S WITH NO	SORTS	•	18,068					
		AVG TIME BET	WEEN 2-SE	C SORTS		42.1	sec				
1-GATE S	ORTS	640	ACT_ND	NUMBER	SPEC_A			ACT_P		FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)
1.	23	3.6%	-14000	0	-223			4000	51	4.2%	4
2	119	18.6%	-12000	1	-191			8000	556	46.3%	8
3	103	16.1%	-10000	2	-159			12000	208	17.3%	12
4	128	20.0%	-8000	1	-127			16000	99	8.2%	16
5	98	15.3%	-6000	7	-95			20000	65	5.4%	20
6	86	13.4%	-4000	<b>3</b> 5	-64			24000	36	3.0%	24
7	66	10.3%	-2000	104	-32			28000	28	2.3%	28
8	17	2.7%	0	226	0			32000	19		32
TOTAL	640		2000	331	32			36000	22		36
			4000	371	64			40000	11		40
2-GATE	SORTS	561	6000	335	95			44000	12		44 48
DETECTR	SORTS	FREQ%	8000	221	127			48000	6		52
8			10000	129				52000	10		56
9	59		12000	81	191			56000	6		60
10	77		14000	31				60000	7		64
11	117		16000	19				64000	4		68
12	119		18000	5				68000 72000	5		72
13	81		20000	3				76000	ر 6		76
14	69		22000	0				80000	7		80
15	39		24000	0				84000	3		84
TOTAL	561		26000	0				>84000 >84000	36		>84
			>28000	0			•	TOTAL	1201		
			TOTAL	1902				IOIAL	1201		
SUMMARY			4404		SORTS BY	ONE (	CATE ON	Y	640	)	
		ICLE EVENTS	1186		SORTS BY				561		
		TICLE EVENTS	394 0		JUNIO DI	180	un I CO				
1	DISTRIBU	ITED EVENTS	U								

#### REC CODE EXPLANATION

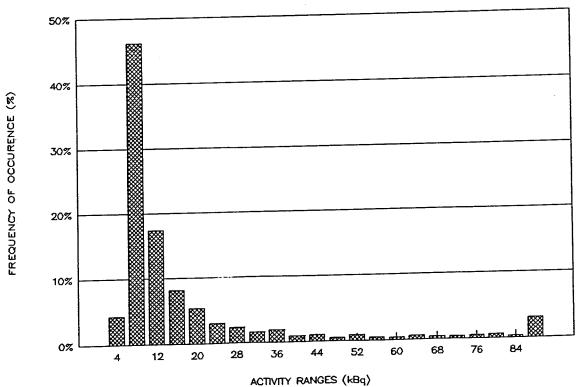
1.00 Source check (Soil on belt)

2.00 Empty belt

SORTER 2 LOG DATA FOR 29-Apr-93



## JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 29-Apr-93



SORTER 1 28-Apr-93				
AVERAGE BACKGROUND COUNT RATE	0.81 ± 0	.04 c/sec		
SORTER SOIL DENSITY	1.3 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m <sup>3</sup>			
		CONTAMINATED	CLEAN	
MASS TOTAL		1.79 tons	114.8 tons	
MAXIMUM/SORT		9.1 kg	60.5 kg	
MINIMUM/SORT		0.8 kg	51.5 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY				98.5%
EQUIVALENT SOIL-IN-GROUND		1.42 yd <sup>3</sup>	91.0 yd3	92.5 yd³/day
EGOLANCEM! 2015-14- GKOOMD		·		
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	:)			
TOTAL	•	40,933 kBq		
MAXIMUM/SORT		2,363 kBq		
MINIMUM/SORT		2.8 kBq		
HIRITION SORT				
DISPERSED + PARTICLE (REALISTIC ES	(IMATE) ACTIVITY	13,339 kBq	10,042 kBq	
MAXIMUM/SORT		1273 kBq	18 kBq	
MINIMUM/SORT		-64 Bq	-6 kBq	
SPECIFIC ACTIVITY		7,461 Bq/kg	87 Bq/k	9
WORK HISTORY				
WORK DAY START	06:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	06:00 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:16 AM	END SOIL PROCESSING	04:58 PM	
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr	
WORK HOURS		11.5 hr		
AVAILABLE HOURS		11.5 hr		
ACTUAL PROCESS HOU	RS (total 20-sec records)	10.71 hr		
DOWN-TIME		0.79 hr		
TOTAL SYSTEM PAUSE		0.00 hr		
NONAVAILABLE HOURS		0.0 hr		
START-UP		0.27 hr		
SHUT-DOWN		0.53 hr		
PLANT PERFORMANCE		93.1%		
PRODUCTIVITY		93.1%		
	rc and 20-sec)	3,693		
TOTAL SOIL PROCESSING RECORDS (2-S		7		
NONPROCESS RECORDS (Test, calibrat	ion, etc)	1,927		
20-SEC PROCESS RECORDS		0 MD>0 & MND=0		
TOTAL SORT		960 AD=0 & MD=0		
NO SORT		966 AD>0&0 <md<mn< td=""><td></td><td><u>'</u></td></md<mn<>		<u>'</u>
SOME SORT	^	1		
UNEXPLAINED RECORD		•	UNEXPLAIN	PAUSE
0 <ad<1kbq &="" md="">0</ad<1kbq>	5		TIME	TIME
AD=0 &			08:52:46	None
AD<0 &			10:41:46	
ACT_P <5 kBq	356 20.2%		10171170	

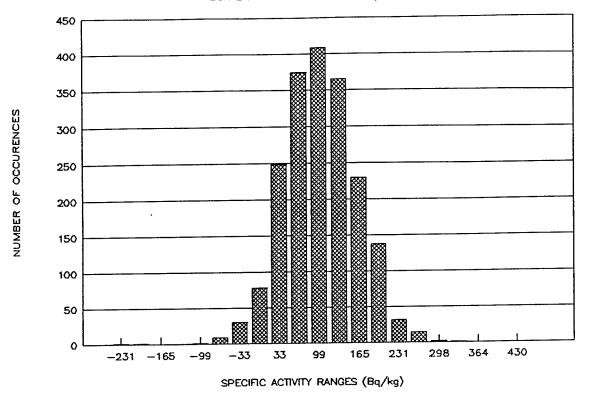
						19,270				10	:50:26
2	-SEC COUNT						(ACT P	>0 kBq)		11	:10:26
	2-\$	EC RECORDS	WITH SO	RTS	4 05	-	(ACI_I	, o kpd)		12	:02:06
	2-\$	EC RECORDS	WITH PO	SITIVES	1M >1 DE	IECIOR	83.1%			16	:07:26
			DETECTOR		375		14.0%				
		_	DETECTOR		63		2.7%				
			DETECTOR		12		0.2%				
		-	DETECTOR		1		0.0%				
			DETECTOR		0		0.0%				
			DETECTOR		0		0.0%				
			DETECTOR	S	U	451	0.0%				
			TAL								
		2-SEC REC				1,315					
		EC PERIODS				17,955					
	AVG	TIME BET	JEEN 2-SE	C SORTS		29.3	Sec				
								ACT_P	SORT	FREQ%	ACT_P
1-GATE	SORTS	881	ACT_ND	NUMBER	_			(Bq)	(#)		(kBq)
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(PQ)	(")		•
				_	074			4000	96	5.4%	4
1	15	1.7%	-14000	1	-231			8000	802	45.4%	8
2	62	7.0%	-12000	1	-198			12000	294	16.6%	12
3	109	12.4%	-10000	0	-165			16000	165	9.3%	16
4	158	17.9%	-8000	0				20000	93	5.3%	20
5	172	19.5%	-6000	1				24000	67	3.8%	24
6	131	14.9%	-4000	9				28000	29	1.6%	28
7	168	19.1%	-2000	30				32000	32	1.8%	32
8	66	7.5%	0	78				36000	24		36
TOTAL	881		2000	248				40000	24	1.4%	40
			4000	375				44000	14	0.8%	44
2-GATE	SORTS	885	6000	409				48000	13		48
DETECTR	SORTS	FREQ%	8000	365				52000	9		52
8			10000	230				56000	4		56
9	32	3.6%	12000	138				60000	4	0.2%	60
10	97	11.0%	14000	32				64000	7		64
11	136	15.4%	16000	14				68000	. 8		68
12	155	17.5%	18000	2				72000	4		72
13	156	17.6%	20000	1				76000	10		76
14	157	17.7%	22000	0				80000	5		80
15	152	17.2%	24000	(				84000	3		84
TOTAL	885		26000	(				>84000	59		>84
			>28000	4074		,		TOTAL	1766		
			TOTAL	1934	•						
SUMMARY	TOTALS		4707		SORTS E	Y ONE	GATE O	NLY	881	l	
	HOT PARTIC		1793		SORTS E				885	5	
	MULTIPARTIC				30013						
	DISTRIBUTE	EVENTS	0								

### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

2.00 Empty belt

SORTER 1 LOG DATA FOR 28-Apr-93



### JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 28-Apr-93

50% 45% 40% FREQUENCY OF OCCURENCE (%) 35% 30% 25% 20% 15% 10% 5% 0% 68 76

ACTIVITY RANGES (kBq)

36

12

20

28

52

60

A-97

SORTER 2 28-Apr-93				
THE STATE OF THE COURT DATE	0.88 ± 0.0	4 c/sec		
AVERAGE BACKGROUND COUNT RATE	1.3 tons/m³			
SORTER SOIL DENSITY	1.65 tons/m³			
GROUND SOIL DENSITY		CONTAMINATED	CLEAN	
		1.85 tons	114.9 tons	
MASS TOTAL	•	8.3 kg	60.5 kg	
MAXIMUM/SORT		0.8 kg	52.2 kg	
MINIMUM/SORT				
WEIGHT RECOVERY OR VOLUME RECOVER	<b>v</b>			98.4%
	•	1.47 yd <sup>3</sup>	91.1 yd³	92.6 yd3/day
EQUIVALENT SOIL-IN-GROUND	•			
PARTICLE ACTIVITY (MAXIMUM ESTIMA	TE)			
		35,071 kBq		
TOTAL		1,986 kBq		
MAXIMUM/SORT		2.7 kBq		
MINIMUM/SORT				
DISPERSED + PARTICLE (REALISTIC E	STIMATE) ACTIVITY	11,444 kBq	9,190 kBq	
		993 kBq	18 kBq	
MAXIMUM/SORT		0 Bq	-6 kBq	
MINIMUM/SORT SPECIFIC ACTIVITY		6,182 Bq/kg	80 Bq/kg	
SPECIFIC ACTIVITY				
WORK HISTORY			05.70 PM	
WORK DAY START	06:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	06:00 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:15 AM	END SOIL PROCESSING	04:58 PM 0.0 hr	
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 111	
		11.5 hr		
WORK HOURS		11.5 hr		
AVAILABLE HOURS		10.72 hr		
	OURS (total 20-sec records)	0.78 hr		
DOWN-TIME		0.00 hr		
TOTAL SYSTEM PAUS		0.0 hr		
NONAVAILABLE HOU	RS	0.26 hr		
START-UP		0.53 hr		
SHUT-DOWN		93.2%		
PLANT PERFORMANC	Ē	93.2%		
PRODUCTIVITY		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
TOTAL SOIL PROCESSING RECORDS (2	-SEC and 20-SEC)	3,740		
TOTAL SOIL PROCESSING RECORDS (2	ation etc)	5		
NONPROCESS RECORDS (Test, calibr	actory deep	1,929		
20-SEC PROCESS RECORDS TOTAL SORT		0 MD>0 & MND=0		
NO SORT		905 AD=0 & MD=0		
SOME SORT		1,024 AD>0&0 <md<mn< td=""><td>Dmax&amp;MND<mndmax< td=""><td></td></mndmax<></td></md<mn<>	Dmax&MND <mndmax< td=""><td></td></mndmax<>	
UNEXPLAINED RECO	RDS	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>			UNEXPLAIN	PAUSE
AD=0	_		TIME	TIME
AD<0	<u> </u>		09:25:46	None
ACT_P <5 kBq	315 17.4%		10:54:26	
var				

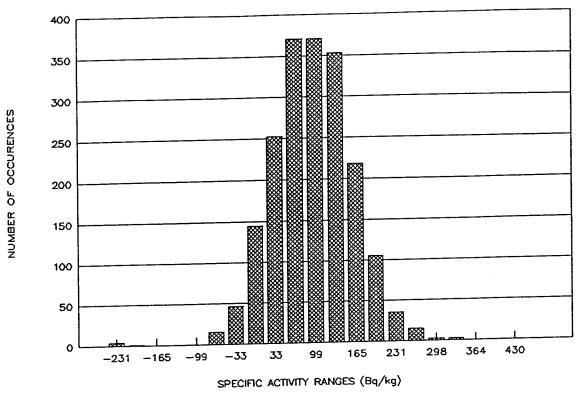
2	2-SEC COUNT PERIODS					19,290				13	3:39:26
-	. 320 00	2-SEC RECORD	S WITH SO	ORTS			(ACT P	>0 kBq)		10	5:58:06
		2-SEC RECORD			IN >1 DE	-	_	•			
			DETECTOR		359		84.3%				
		_	DETECTOR		62		14.6%				
			DETECTOR		5		1.2%				
			DETECTOR		0		0.0%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
			OTAL	•	•	426					
		NET 2-SEC RE		ru enere		1,385					
		2-SEC PERIOD				17,905					
		AVG TIME BET				27.9	SAC				
		AVG TIME BET	WEEN 2-3	C SORIS		21.7	300				
1-GATE S	SORTS	936	ACT ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	_ (Bq)		(Bq/kg)			(Bq)	(#)		(kBq)
			·								
1	38	4.1%	-14000	4	-231			4000	95	5.2%	4
2	155	16.6%	-12000	. 1	-198			8000	803	44.3%	8
3	140	15.0%	-10000	0	-165			12000	328	18.1%	12
4	201	21.5%	-8000	0	-132			16000	154	8.5%	16
5	180	19.2%	-6000	0	-99			20000	97	5.4%	20
6	132	14.1%	-4000	15	-66			24000	71	3.9%	24
7	73	7.8%	-2000	46	-33			28000	35	1.9%	28
8	17	1.8%	0	144	0			32000	39	2.2%	32
TOTAL	936		2000	252	33			36000	23	1.3%	36
			4000	371	66			40000	23	1.3%	40
2-GATE	SORTS	875	6000	371	99			44000	19	1.0%	44
DETECTR	SORTS	FREQ%	8000	353	132			48000	13	0.7%	48
8			10000	218	165			52000	13	0.7%	52
9	68	7.8%	12000	105	198			56000	6	0.3%	56
10	136	15.5%	14000	35	231			60000	12	0.7%	60
11	169	19.3%	16000	15	264			64000	7	0.4%	64
12	189	21.6%	18000	2	298			68000	5	0.3%	68
13	170	19.4%	20000	2	331			72000	11	0.6%	72
14	104	11.9%	22000	0	364			76000	3	0.2%	76
15	39		24000	0	397			80000	4	0.2%	80
TOTAL	875		26000	0	430			84000	2	0.1%	84
			>28000	0	0		,	84000	48	2.7%	>84
			TOTAL	1934				TOTAL	1811		
SUMMARY	TOTALS										
1	HOT PART	ICLE EVENTS	1838		SORTS BY	ONE G	ATE ON	.Υ	936		
1	MULTIPAR	TICLE EVENTS	<b>59</b> 5		SORTS BY	TWO G	ATES		875		
1	DISTRIBU	ITED EVENTS	0								

#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

2.00 Empty belt

SORTER 2 LOG DATA FOR 28-Apr-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 28-Apr-93

50% 45% 40% FREQUENCY OF OCCURENCE (%) 35% 30% 25% 20% 15% 10% 5% **₩₩₩₩₩₩**₩₩ 0% 76 84 28 36 20 4 12

ACTIVITY RANGES (kBq)

A-100

SORTER 1 27-Apr-93				
AVERAGE BACKGROUND COUNT RATE	0.80 ± 0.0	02 c/sec		
SORTER SOIL DENSITY	1.3 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m <sup>3</sup>			
_		CONTAMINATED	CLEAN	
MASS TOTAL		1.61 tons	112.8 tons	
MAXIMUM/SORT		6.8 kg	60.5 kg	
MINIMUM/SORT		0.8 kg	53.7 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY				98.6%
EQUIVALENT SOIL-IN-GROUND		1.27 yd³	89.5 yd³	90.7 yd3/day
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)		0/ 0/0 / 0		
TOTAL		26,212 kBq		
MAXIMUM/SORT		432 kBq		
MINIMUM/SORT		2.5 k8q		
	ATEN ACTIVITY	8,553 kBq	8,923 kBq	
DISPERSED + PARTICLE (REALISTIC ESTIM	AIE) ACIIVIII	230 kBq	18 kBq	
MAXIMUM/SORT		0 Bq	-17 kBq	
MINIMUM/SORT SPECIFIC ACTIVITY		5,326 Bq/kg	79 Bq/k	9
SPECIFIC ACTIVITY		7,000 D.Q. N.S	•	
WORK HISTORY				
	6:00 AM	WORK DAY END	05:30 PM	
	6:00 AM	PLANT SHUT-DOWN	05:30 PM	
	6:32 AM	END SOIL PROCESSING	05:02 PM	
***************************************	1:30 AM	LUNCH PERIOD	0.0 hr	
WORK HOURS		11.5 hr		
AVAILABLE HOURS		11.5 hr		
ACTUAL PROCESS HOURS	(total 20-sec records)	10.51 hr		
DOWN-TIME		0.99 hr		
TOTAL SYSTEM PAUSE		0.44 hr		
NONAVAILABLE HOURS		0.0 hr		
START-UP		0.55 hr		
SHUT-DOWN		0.45 hr		
PLANT PERFORMANCE		91.4%		
PRODUCTIVITY		91.4%		
		3,510		
TOTAL SOIL PROCESSING RECORDS (2-SEC		8		
NONPROCESS RECORDS (Test, calibration	, etc)	1,891		
20-SEC PROCESS RECORDS		0 MD>0 & MND=0		
TOTAL SORT		1,015 AD=0 & MD=0 &	MND>0	
NO SORT SOME SORT		875 AD>0&0 <md<mn0< td=""><td></td><td></td></md<mn0<>		
UNEXPLAINED RECORDS		1		
0 <ad<1kbq &="" md="">0</ad<1kbq>	3	•	UNEXPLAIN	PAUSE
AD=0 & MD	1		TIME	TIME
AD-0 & MD	0		09:10:39	06:06
ACT_P <5 kBq	355 21.9%		10:05:39	
1017. 2 Kpd	<del>_</del>			

						18,910				10	:39:39
2-SEC COUNT PERIODS 2-SEC RECORDS WITH SORTS							(ACT P	>0 kBq)	-	13	:14:59
	2-S	EC RECORDS	WITH SO	KIS CITIVEC I	IN >1 DE	-	_				
	2-\$	DETECTOR:		356		83.8%					
		DETECTOR		63		14.8%					
		DETECTOR		6		1.4%					
		DETECTOR		0		0.0%					
		DETECTOR		0		0.0%					
		DETECTOR		0		0.0%					
		DETECTOR		0		0.0%					
TOTAL				3		425					
	CORDS WIT	H SORTS		1,194							
		WITH NO			17,716						
	EEN 2-SE			31.7							
	AVO	C TIME BEI	REEN 2.3C	C JONIO				_			
		804	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
1-GATE S			(Bq)		(Bq/kg)			(Bq)	(#)		(kBq)
DETECTR	SORTS	FREQ%	(bq)	()	(						
	40	2.2%	-14000	1	-231			4000	103	6.4%	4
1	18	9.5%	-12000	1	-198			8000	741	45.8%	8
2	76	13.7%	-10000	2	-165			12000	263	16.2%	12
3	110	18.3%	-8000	1	-132			16000	141	8.7%	16
4	147	19.2%	-6000	0	-99			20000	92	5.7%	20
5	154	15.8%	-4000	1	-66			24000	43	2.7%	24
6	127	14.7%	-2000	25	-33			28000	42	2.6%	28
7	118	6.7%	0	101	0			32000	24	1.5%	32
8	54	0.1%	2000	250	33			36000	16	1.0%	36
TOTAL	804		4000	392	66			40000	21	1.3%	40
	2027	815	6000	502	99			44000	11	0.7%	44
2-GATE SORTS DETECTR SORTS		FREQ%	8000	355	132			48000	21	1.3%	48
DETECTR	30K13	1 VC 410	10000	180	165			52000	11	0.7%	52
8 9	44	5.4%	12000	64	198			56000	12	0.7%	56
10	96	11.8%	14000	15	231			60000	4	0.2%	60
11	124	15.2%	16000	7	264			64000	6	0.4%	64
12	148	18.2%	18000	2	298			68000	10	0.6%	68
13	170	20.9%	20000	0	331			72000	7	0.4%	72
14	124	15.2%	22000	0	364			76000	7	0.4%	76
15	109	13.4%		0	397	•		80000	8		80
TOTAL	815		26000	0	430	)		84000	1	0.1%	84
IUIAL	017		>28000	0	) (	)		>84000	35		>84
			TOTAL	1899	•			TOTAL	1619		
SUMMARY TOTALS											
HOT PARTICLE EVENTS			1654		SORTS E			ILY	804		
MULTIPARTICLE EVENTS			456		SORTS E	Y TWO	GATES		815		
HOLI MINISTER TOWN											

#### REC CODE EXPLANATION

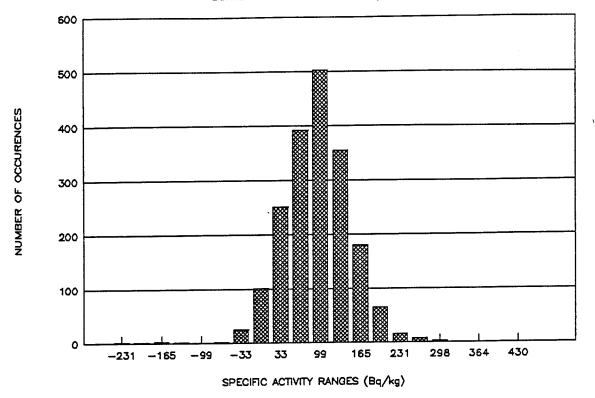
1.00 Source check (Soil on belt)

0

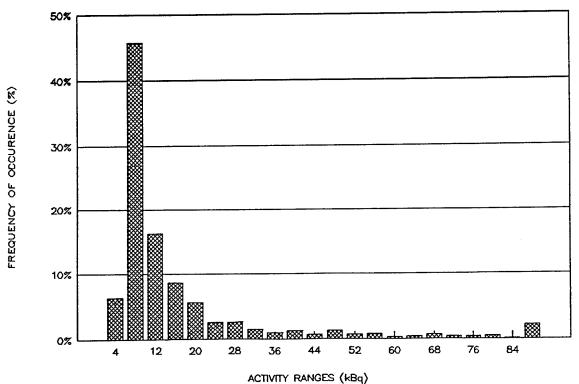
2.00 Empty belt

DISTRIBUTED EVENTS

SORTER 1 LOG DATA FOR 27-Apr-93



## JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 27-Apr-93



A-103

SORTER 2 27-Apr-93				
AVERAGE BACKGROUND COUNT RATE	0.88 ± 0.0	3 c/sec		
SORTER SOIL DENSITY	1.3 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³			
GROOMD SOLE SENSON		CONTAMINATED	CLEAN	
MASS TOTAL		1.61 tons	113.2 tons	
MAXIMUM/SORT		7.6 kg	60.5 kg	
MINIMUM/SORT		0.8 kg	53 kg	
				98.6%
WEIGHT RECOVERY OR VOLUME RECOVERY	•			
EQUIVALENT SOIL-IN-GROUND		1.27 yd³	89.7 yd <sup>3</sup>	91.0 yd3/day
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	E)			
TOTAL		29,343 kBq		
MAXIMUM/SORT .		1,302 kBq		
MINIMUM/SORT		3.0 kBq		
		0.077 1:0-	8,889 kBq	
DISPERSED + PARTICLE (REALISTIC ES	STIMATE) ACTIVITY	9,863 kBq	17 kBq	
MAXIMUM/SORT		727 kBq	-16 k8q	
MINIMUM/SORT		0 Bq	79 Bq/kg	•
SPECIFIC ACTIVITY		6,142 Bq/kg	17 047 43	
WORK HISTORY		WORK DAY END	05:30 PM	
WORK DAY START	06:00 AM	PLANT SHUT-DOWN	05:30 PM	
PLANT START-UP	06:00 AM	END SOIL PROCESSING		
START SOIL PROCESSING	06:32 AM	LUNCH PERIOD	0.0 hr	
LUNCH START	11:30 AM	FOUCH 1 FW100		
		11.5 hr		
WORK HOURS		11.5 hr		
AVAILABLE HOURS	URS (total 20-sec records)	10.54 hr		
	OKS (1018) 20 300 1 000 407	0.96 hr		
DOWN-TIME TOTAL SYSTEM PAUS	E	0.44 hr		
NONAVAILABLE HOUR		0.0 hr		
START-UP	•	0.55 hr		
SHUT-DOWN		0.42 hr		
PLANT PERFORMANCE		91.6%		
PRODUCTIVITY		91.6%		
PRODUCTION				
TOTAL SOIL PROCESSING RECORDS (2-	SEC and 20-SEC)	3,437		
NONPROCESS RECORDS (Test, calibra	tion, etc)	2		
20-SEC PROCESS RECORDS	-	1,897		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		979 AD=0 & MD=0		
SOME SORT		917 AD>0&0 <md<mn< td=""><td>Dmax&amp;MND<mndmax< td=""><td></td></mndmax<></td></md<mn<>	Dmax&MND <mndmax< td=""><td></td></mndmax<>	
UNEXPLAINED RECOR	os estados	1		DAUCE
0 <ad<1kbq &="" md="">0</ad<1kbq>	4		UNEXPLAIN	PAUSE
AD=0 8	. MD 1		TIME	TIME 06:06
AD<0 8	k MD 0		08:18:59	00.00
ACT_P <5 kBq	268 17.4%		10:49:19	
<del>-</del>				

2	-SEC CO	UNT PERIODS				18,970			1	1:25:59
		2-SEC RECORD	S WITH S	ORTS		1,540 (A	T_P >0 kBq)	)	1	3:06:19
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR			1	6:37:39
			DETECTO		291		.8%			
		3	DETECTO	RS	42	12.	.4%			
		4	DETECTO	RS	5	1.	.5%			
		5	DETECTO	RS	1	0.	.3%			
		6	DETECTO	RS	0	0.	.0%			
		7	DETECTO	RS	0	0.	.0%			
		8	DETECTO	RS	0	0.	.0%			
		Т	OTAL			339				
		NET 2-SEC RE	CORDS WI	TH SORTS		1,201				
		2-SEC PERIOD	S WITH N	O SORTS		17,769				
		AVG TIME BET	WEEN 2-S	EC SORTS		31.6 sec	:			
1-GATE S	ORTS	796	ACT_ND		SPEC_A		ACT_P		FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(Bq)	(#)		(kBq)
_		c 74	4/000		274		4000	76	4.9%	4
1	42		-14000	1	-231 -198		8000	740		8
2	139		-12000	1	- 165		12000	246		12
3	135	17.0%	-10000	0	-132		16000	130		16
4	139		-8000	0	-132		20000	66		20
5	130		-6000	0 4	-66		24000	57		24
6	114	14.3%	-4000	38	-33		28000	36		28
7	73	9.2%	-2000	110	-33		32000	25		32
8	24	3.0%	0 2000	238	33		36000	23		36
TOTAL	796		4000	419	66		40000	20		40
3 0475 0	0070	744	6000	450	99		44000	15		44
2-GATE S			8000	346	132		48000	9		48
DETECTR 8	SORTS	FREQA	10000	186	165		52000	7		52
9	89	12.0%	12000	64	198		56000	4		56
10	131	17.6%	14000	32	231		60000	9		60
11	129		16000	7	264		64000	6		64
12	132		18000	3	298		68000	5		68
13	119		20000	0	331		72000	4		72
14	91	12.2%	22000	0	364		76000	3		76
15	53		24000	0	397		80000	4	0.3%	80
TOTAL	744		26000	0	430		84000	4	0.3%	84
TOTAL	144		>28000	0	0		>84000	51		>84
			TOTAL	1899	•		TOTAL	1540		
SUMMARY	TOTALS									
		ICLE EVENTS	1571		SORTS BY	ONE GATE	ONLY	796		
		TICLE EVENTS	538		SORTS BY	TWO GATES	s	744		
• • • • • • • • • • • • • • • • • • • •			_							

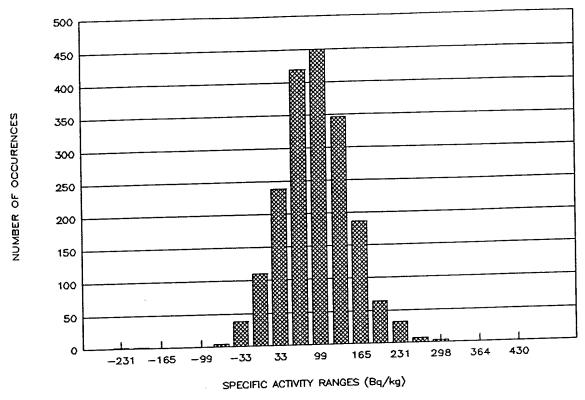
### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

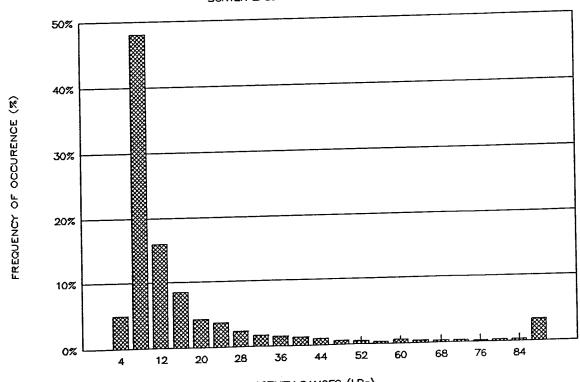
2.00 Empty belt

DISTRIBUTED EVENTS

SORTER 2 LOG DATA FOR 27-Apr-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 27-Apr-93



ACTIVITY RANGES (kBq)

A-106

SORTER 1 26-Apr-93				
. AVERAGE BACKGROUND COUNT RATE	0.82 ± (	0.05 c/sec		
SORTER SOIL DENSITY	1.3 tons/m <sup>3</sup>			
GROUND SOIL DENSITY	1.65 tons/m³			
		CONTAMINATED	CLEAN	
MASS TOTAL		1.71 tons	113.3 tons	
MAXIMUM/SORT		6.8 kg	60.5 kg	
MINIMUM/SORT		0.8 kg	53.7 kg	
WEIGHT RECOVERY OR VOLUME RECOVE	RY			98.5%
EQUIVALENT SOIL-IN-GROUND		1.35 yd³	89.9 yd <sup>3</sup>	91.2 yd <sup>3</sup> /day
TOTAL	475			
PARTICLE ACTIVITY (MAXIMUM ESTIM	AIE)	29,201 kBq		
TOTAL		1,053 kBq		
MAXIMUM/SORT		2.9 kBq		
MINIMUM/SORT		20, 1104		
DISPERSED + PARTICLE (REALISTIC	ESTIMATE) ACTIVITY	9,481 kBq	9,107 kBq	
MAXIMUM/SORT		572 kBq	22 kBq	•
MINIMUM/SORT		0 Bq	-7 k8q	
SPECIFIC ACTIVITY		5,552 Bq/kg	80 Bq/k	g
G. 2011 15 NO. 1011				
WORK HISTORY				
WORK DAY START	05:50 AM	WORK DAY END	05:30 PM	
PLANT START-UP	05:50 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:27 AM	END SOIL PROCESSING		
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr	
WORK HOURS		11.7 hr		
AVAILABLE HOURS		11.7 hr		
ACTUAL PROCESS H	OURS (total 20-sec records)	10.56 hr		
DOWN-TIME		1.11 hr		
TOTAL SYSTEM PAU	SE	0.55 hr		
NONAVAILABLE HOU	RS ·	0.0 hr		
START-UP		0.63 hr		
SHUT-DOWN		0.48 hr		
PLANT PERFORMANO	E	90.5%		
PRODUCTIVITY		90.5%		
TOTAL SOIL PROCESSING RECORDS (2	-SEC and 20-SEC)	3,561		
NONPROCESS RECORDS (Test, calibr		14		
20-SEC PROCESS RECORDS		1,901		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		957 AD=0 & MD=0 &		
SOME SORT		944 AD>0&0 <md<mn< td=""><td>xemONM&gt;DNM&amp;xemC</td><td>(</td></md<mn<>	xemONM>DNM&xemC	(
UNEXPLAINED RECO	RDS	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	2		UNEXPLAIN	PAUSE
AD=0	& MD 0		TIME	TIME
AD<0			08:21:35	05:54
ACT_P <5 kBq	333 20.1%		16:52:55	

2-SEC COUNT PERIODS	19,0	010 660 (ACT_P >0 kBq)
2-SEC RECORDS WITH SORTS	•	
2-SEC RECORDS WITH POSITIVES	IN >1 DETEC	TOR
2 DETECTORS	343	84.3%
3 DETECTORS	54	13.3%
4 DETECTORS	9	2.2%
5 DETECTORS	1	0.2%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL		407
NET 2-SEC RECORDS WITH SORTS	1,	253
2-SEC PERIODS WITH NO SORTS	17,	757
AVG TIME BETWEEN 2-SEC SORTS	3	0.3 sec

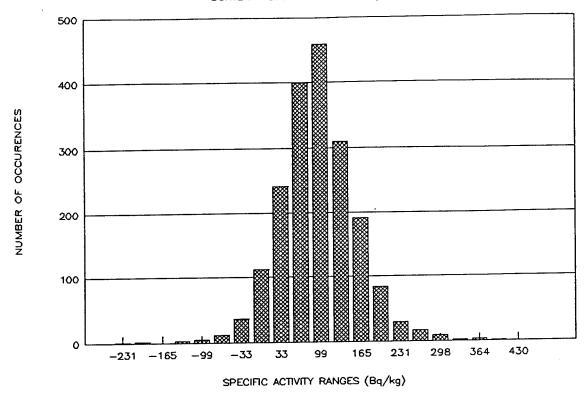
4 0475 60	20.70	832	ACT_ND	NUMBER	SPEC A	ACT_	P SORT	FREQ%	ACT_P
1-GATE SC		FREQ%	(Bq)		(Bq/kg)	(Be	q) (#)		(kBq)
DETECTR	SORTS	LKEW	(64)	<b></b>					
		2 (4	-14000	1	-231	40	00 103	6.2%	4
1	22	2.6%	-12000	2	-198	80	00 743	44.8%	8
2	62	7.5%		0	-165	120	00 301	18.1%	12
3	106	12.7%	-10000	3	-132	160	00 148	8.9%	16
4	136	16.3%	-8000	5	-99	200	00 78	4.7%	20
5	163	19.6%	-6000	_		240		3.2%	24
6	148	17.8%	-4000	12		280		1.9%	28
7	143	17.2%	-2000	36		320			32
8	52	6.3%	0	112	-	360			36
TOTAL	832		2000	241		400	••		40
			4000	399		440	• •		44
2-GATE S	ORTS	828	6000	460		480			48
DETECTR	SORTS	FREQ%	8000	309		520	••		52
8			10000	191		560			56
9	47	5.7%	12000	84		600			60
10	76	9.2%	14000	29					64
11	133	16.1%	16000	16		640		0.2%	68
12	142	17.1%	18000	9		680		5 0.3%	72
13	145	17.5%	20000	2	331	720			76
14	155	18.7%	22000	3	364	760		0.5%	80
15	130	15.7%	24000	1	397	800	,,,,	4 0.2%	
TOTAL	828		26000	(	430	840		3 0.2%	84
TOTAL			>28000	(	) 0	>840			>84
			TOTAL	1915	i	TO	TAL 166	0	
SUMMARY			4/0/		CODTC DV	ONE GATE ONLY	83	2	
	OT PARTIC		1696			TWO GATES	82	8	
1	<b>WLTIPARTI</b>	CLE EVENTS	549		20K12 D1	INC OVIES			

#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt

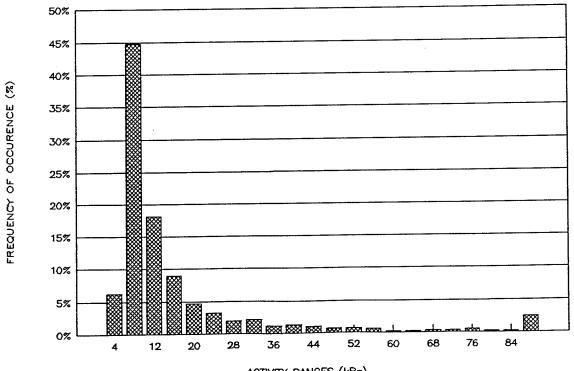
DISTRIBUTED EVENTS

SORTER 1 LOG DATA FOR 26-Apr-93



## JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 26-Apr-93



ACTIVITY RANGES (kBq)

A-109

SORTER 2	26-Apr-93						
AVERAGE BACKGROUN	IN COUNT RATE		0.89	± 0.03	c/sec		
SORTER SOIL DENSI			1.3	tons/m³			
GROUND SOIL DENSI			1.65	tons/m³		a. 54H	
CKOOMD SOLE DEMS!					CONTAMINATED	CLEAN	
WACO TOTAL					1.67 tons	113.8 tons	
MASS TOTAL MAXIMUM/SO	no T				6.8 kg	60.5 kg	
MINIMUM/SC					0.8 kg	53.7 kg	
HINIHOW S	J						98.6%
UETCUT DECOVERY	OR VOLUME RECOVERY					2h., 2, 00	91.5 yd3/day
EQUIVALENT SOIL-					1.32 yd <sup>3</sup>	90.2 yd3	91.5 ya 7aay
EGOLANCEM! DOLE	••• <del>•</del> •••						
DARTICLE ACTIVIT	Y (MAXIMUM ESTIMATE)	)					
TOTAL	. •				31,008 kBq		
MAXIMUM/S	ORT				924 kBq		
MINIMUM/S					2.6 kBq		
						8,037 kBq	
DISPERSED + PART	ICLE (REALISTIC EST	(MATE) ACTI	YTIV		10,087 kBq	19 kBq	
MAXIMUM/S					501 kBq	-9 k8q	
MINIMUM/S					0 Bq	71 Bq/kg	
SPECIFIC					6,039 Bq/kg	,, oqs	
WORK HISTORY						05:30 PM	
WORK DAY	START	05:50 AM			WORK DAY END	05:30 PM	
PLANT STA		05:50 AM			PLANT SHUT-DOWN	05:02 PM	
	L PROCESSING	06:27 AM			END SOIL PROCESSING	0.0 hr	
LUNCH ST		11:30 AM			LUNCH PERIOD	0.0	
	WORK HOURS				11.7 hr		
	AVAILABLE HOURS				11.7 hr		
	ACTUAL PROCESS HOUR	S (total 20	)-sec	records)	10.59 hr		
	DOWN-TIME	•			1.07 hr		
	TOTAL SYSTEM PAUSE				0.55 hr	•	
	NONAVAILABLE HOURS				0.0 hr		
	START-UP				0.63 hr		
	SHUT-DOWN				0.45 hr		
	PLANT PERFORMANCE				90.8%		
	PRODUCTIVITY				90.8%		
TOTAL COLL BROC	ESSING RECORDS (2-SI	EC and 20-S	EC)		3,532		
MONDBOCESS BECO	RDS (Test, calibrat	ion, etc)			8		
NONPROCESS RECO	ROCESS RECORDS	·			1,907		
20-366 1	TOTAL SORT				0 MD>0 & MND=0		
	NO SORT				987 AD=0 & MD=0	& MNU>U	
	SOME SORT				920 AD>0&0 <md<mn< td=""><td>NWSX6WN7 CMW9X8WN</td><td></td></md<mn<>	NWSX6WN7 CMW9X8WN	
	UNEXPLAINED RECORD	s			0	INCVOLATA	PAUSE
	0 <ad<1kbq &="" md="">0</ad<1kbq>	4				UNEXPLAIN	TIME
	& 0=QA	MD 0				TIME 09:59:16	05:54
	& 0>,CA	MD 0				11:40:56	
	ACT_P <5 kBq	251	15	.4%		11.40.70	

19,070

12:00:36

2		MI PEKIUUS				17,070					40.77.44
		2-SEC RECORD						>0 kBq)			12:37:16
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR					
		2	DETECTO	RS	339		85.0%				
		3	DETECTO	RS	52		13.0%				
		4	DETECTO	RS	6		1.5%				
		5	DETECTO	RS	2		0.5%				
		6	DETECTO	RS	0		0.0%				
		7	DETECTO	RS	0		0.0%				
		8	DETECTO	RS	0		0.0%				
		T	OTAL			399					
		NET 2-SEC RE	CORDS WI	TH SORTS		1,226	,				
		2-SEC PERIOD	S WITH N	O SORTS		17,844					
		AVG TIME BET	WEEN 2-S	EC SORTS		31.1	sec				
						-		40T D	COST	5050*	ACT D
1-GATE S	ORTS	833	ACT_ND		SPEC_A			ACT_P		FREQ%	_
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)
1	39	4.7%	-14000	4	-231			4000	84	5.2%	4
2	127	15.2%	-12000	0	-198			8000	721	44.4%	8
3	169		-10000	0	-165			12000	285	17.5%	
4	158	19.0%	-8000	2				16000	152	9.4%	16
. 5	146	17.5%	-6000	5				20000	70	4.3%	
6	114	13.7%	-4000	10	-66	••		24000	56	3.4%	
7	63	7.6%	-2000	54	-33			28000	40	2.5%	
8	17	2.0%	0	168	0			32000	34	2.1%	
TOTAL	833	2.0%	2000	309	33			36000	24	1.5%	
IOIAL	655		4000	395	66			40000	25	1.5%	
2-GATE S	OUTC	792	6000	388	99			44000	15	0.9%	
DETECTR	SORTS	FREQ%	8000	304	132			48000	12	0.7%	
8 B	30K13	FREMA	10000	167				52000	10	0.6%	
9	77	9.7%	12000	62	198			56000	10	0.6%	
10	106	13.4%	14000	22	231			60000	8	0.5%	
11	182	23.0%	16000	15	264			64000	6		
12	166	21.0%	18000	8	298			68000	8		
13	124	15.7%	20000	2				72000	3		
14	95	12.0%	22000	0	364			76000	6		
	42	5.3%	24000	0	397			80000	5		
15		3.3%		0	430			84000	4	0.2%	
TOTAL	792		26000 >28000	0	430			84000	47		
				1915	U		•	TOTAL	1625	s / A	
SUMMARY	2 IATOT		TOTAL	כועו				IOIAL	1023		
		CLE EVENTS	1655		SORTS BY	ONE G	ATE ONL	.Y	833		
		ICLE EVENTS	539		SORTS BY				792		
		ED EVENTS	0								

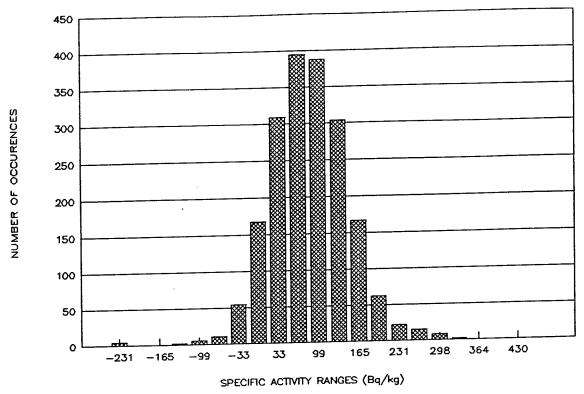
#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

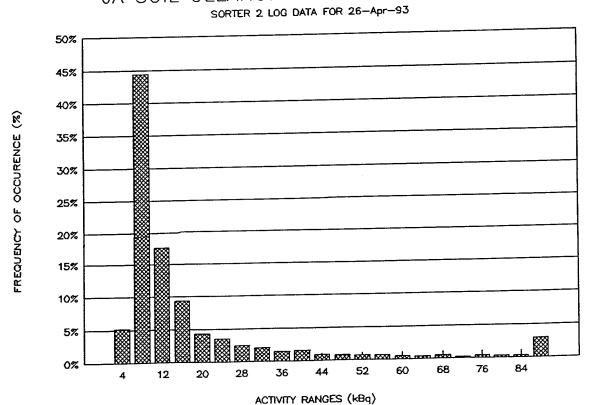
2.00 Empty belt

2-SEC COUNT PERIODS

SORTER 2 LOG DATA FOR 26-Apr-93



# JA SOIL CLEANUP PLANT HOT PARTICLES



A-112

SORTER 1 24-Apr-	-93									
AVERAGE BACKGROUND COUNT	RATE		0.68	±	0.05	c/sec				
SORTER SOIL DENSITY			1.3	tons/m	3					
GROUND SOIL DENSITY			1.65	tons/m	3					
						CONTAM	INATED	CLEAN		
MASS TOTAL						0.11	tons	11.4	tons	
MAXIMUM/SORT						3.8	kg	60.5	kg	
MINIMUM/SORT						0.8	kg	56.8	kg	
WEIGHT RECOVERY OR VOLUM	IF RECOVERY									99.0%
EQUIVALENT SOIL-IN-GROUN						0.09	yd³	9.1	yd³	9.2 yd3/day
ENGLANCEM! SOLE IN GROOM							,		·	
PARTICLE ACTIVITY (MAXIM	UM ESTIMATE)									
TOTAL						1,255	kBq			
MAXIMUM/SORT						-	' kBq			
MINIMUM/SORT							kBq			
FILE PROPERTY SORT							•			
DISPERSED + PARTICLE (RE	ALISTIC ESTIMATE	) ACTIV	'ITY			446	k8q	1,182	kBq	
MAXIMUM/SORT		,				53	kBq	15	kBq	
MINIMUM/SORT							Bq	-5	kBq	
SPECIFIC ACTIVITY	1						Bq/kg	103	Bq/kg	
Si Coll 10 Not 1111	•					•			•	
WORK HISTORY										
WORK DAY START	07:0	O AM				WORK D	AY END	05:30 PM		
PLANT START-UP	03:2	6 PM				PLANT	SHUT-DOWN	04:31 PM		
START SOIL PROCES						END SO	IL PROCESSING	04:30 PM		
LUNCH START	11:3					LUNCH	PER I OO	0.0	hr	
TOOK NO	100						10.5 hr			
WORK HOU							1.1 hr			
AVAILABL		+=1 20-		sanda)			1.06 hr			
	PROCESS HOURS (to	tat 20-	sec re	ecoi us )			0.02 hr			
DOWN-TIM							0.02 M			
	/STEM PAUSE LABLE HOURS						9.4 hr			
START-UP							0.01 hr			
							0.02 hr			
SKUT-DOW							97.9%			
	ERFORMANCE						10.1%			
PRODUCTI	14111						10.1.4			
TOTAL SOIL PROCESSING RE	CORDS (2-SEC and	20-SEC	:)				291			
NONPROCESS RECORDS (Test	t, calibration, e	tc)					5			
20-SEC PROCESS RE	CORDS					191				
TOTAL SO	ORT					0	MD>0 & MND=0			
NO SORT						120	AD=0 & MD=0	& MND>0		
SOME SOR	RT					71	AD>0&0 <mn< td=""><td>M⊳DNM&amp;xamD</td><td>NDmax</td><td></td></mn<>	M⊳DNM&xamD	NDmax	
UNEXPLAT	NED RECORDS					0	1			
0 <ad<1ke< td=""><td>3q &amp; MD&gt;0</td><td>0</td><td></td><td></td><td></td><td></td><td></td><td>UNEXPLAI</td><td>N</td><td>PAUSE</td></ad<1ke<>	3q & MD>0	0						UNEXPLAI	N	PAUSE
	AD=0 & MD	0						TIME		TIME
	AD<0 & MD	0						None		None
			18.0							

2-SEC CC	OUNT PERIODS	1	,910	
2 020 0	2-SEC RECORDS WITH SORTS		100 (ACT	_p >0 kBq)
	2-SEC RECORDS WITH POSITIVES	IN >1 DETE	CTOR	
	2 DETECTORS	15	75.0	1%
	3 DETECTORS	4	20.0	1%
	4 DETECTORS	1	5.0	1%
	5 DETECTORS	0	0.0	1%
	6 DETECTORS	0	0.0	1%
	7 DETECTORS	0	0.0	)%
	8 DETECTORS	0	0.0	)%
	TOTAL		20	
	NET 2-SEC RECORDS WITH SORTS		80	
	2-SEC PERIODS WITH NO SORTS	•	1,830	
	AVG TIME BETWEEN 2-SEC SORTS		47.8 sec	
E CODTS	51 ACT ND NUMBER	SPEC_A		ACT_P

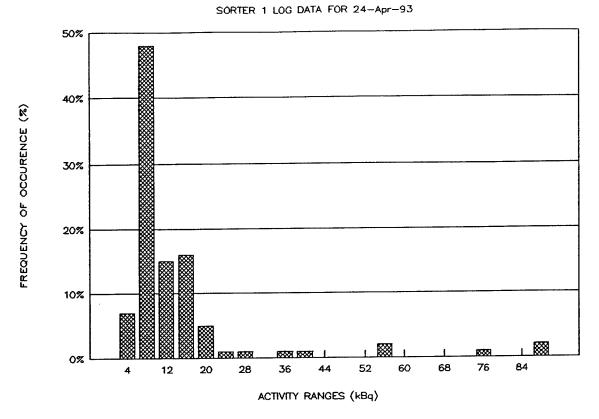
1-GATE		51	ACT_ND	NUMBER	SPEC_A (Bq/kg)	ACT_P (Bq)	SORT	FREQ%	ACT_P (kBq)
DETECTR	SORTS	FREQ%	(Bq)	(#)	(pd) va)	1-1-	-		
	•	0.0%	-14000	0	-231	4000	7	7.0%	4
1	0	3.9%	-12000	0	-198	8000	48	48.0%	8
2	2	11.8%	-10000	1	-165	12000	15	15.0%	12
3	6	11.8%	-8000	1	-132	16000	16	16.0%	16
4	6	23.5%	-6000	0	-99	20000	5	5.0%	20
5	12	17.6%	-4000	1	-66	24000	1	1.0%	24
6	9	23.5%	-2000	3		28000	1	1.0%	28
7	12	7.8%	-2000	7	_	32000	0	0.0%	32
8	4	1.04	2000	15	33	36000	1	1.0%	36
TOTAL	51		4000	26		40000	1	1.0%	40
		49	6000	41	99	44000	0	0.0%	44
2-GATE			8000	44		48000	0	0.0%	48
DETECTR	SORTS	FREQ%	10000	32		52000	0	0.0%	52
8	_	0.0%	12000	11		56000	2	2.0%	56
9	0		14000	13		60000	0	0.0%	60
10	3	6.1%	16000	1		64000	0	0.0%	64
11	7	14.3%	18000	0		68000	0	0.0%	68
12	8	16.3%	20000	0		72000	0	0.0%	72
13	10	20.4%		0		76000	1	1.0%	76
14	11	22.4%		C		80000	0	0.0%	80
15	10	20.4%		C		84000	0	0.0%	84
TOTAL	49		26000	(		>84000	2	2.0%	>84
			>28000	196		TOTAL	100		
			TOTAL	170	,				
SUMMAR	TOTALS		405		SUBTS BY	ONE GATE ONLY	51		
	HOT PARTICL		105			TWO GATES	49		
	MULTIPARTIC				30/13 01	, w			
	DISTRIBUTED	EVENTS	0						

#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

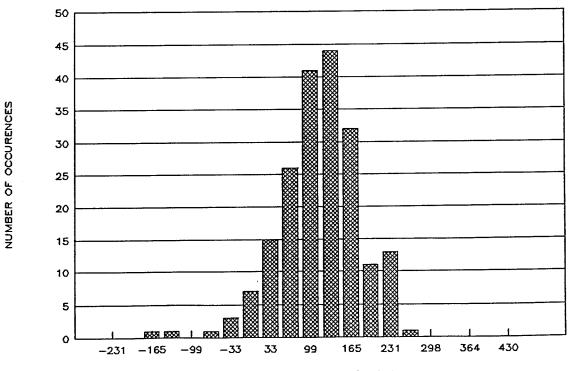
2.00 Empty belt

# JA SOIL CLEANUP PLANT HOT PARTICLES



## CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 24-Apr-93



SPECIFIC ACTIVITY RANGES (Bq/kg)

SORTER 2 24-Apr-93				
AVERAGE BACKGROUND COUNT RATE	0.76 ± 0	.05 c/sec		
SORTER SOIL DENSITY	1.3 tons/m <sup>3</sup>			
GROUND SOIL DENSITY	1.65 tons/m³			
GROUND SUIL DENSITY		CONTAMINATED	CLEAN	
		0.13 tons	11.3 tons	
MASS TOTAL		5.3 kg	60.5 kg	
MAXIMUM/SORT		0.8 kg	55.2 kg	
MINIMUM/SORT				
DECOVERY				98.9%
WEIGHT RECOVERY OR VOLUME RECOVERY		0.10 yd3	9.0 yd <sup>3</sup>	9.1 yd3/day
EQUIVALENT SOIL-IN-GROUND		•		
	•			
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	•	4,638 kBq		
TOTAL		1,394 kBq		•
MAXIMUM/SORT		3.7 kBq		
MINIMUM/SORT		<b>5.1</b> 1.0 q		
		1,400 kBq	906 kBq	
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTIVITY	674 kBq	16 kBq	
MAXIMUM/SORT		0 Bq	-4 kBq	
MINIMUM/SORT		10,752 Bq/kg	80 Bq/ks	3
SPECIFIC ACTIVITY		10,132 04143	•	
WORK HISTORY	07:00 AM	WORK DAY END	05:30 PM	
WORK DAY START	03:26 PM	PLANT SHUT-DOWN	04:31 PM	
PLANT START-UP	03:26 PM	END SOIL PROCESSING	04:29 PM	
START SOIL PROCESSING	11:30 AM	LUNCH PERIOD	0.0 hr	
LUNCH START	11:30 MH			
TOUR HOURS		10.5 hr		
WORK HOURS AVAILABLE HOURS		1.1 hr		
AVAILABLE ROOKS	RS (total 20-sec records)	1.05 hr		
	KO (1011 10 01)	0.03 hr		
DOWN-TIME Total System Pause		0.00 hr		
NONAVAILABLE HOURS		9.4 hr		
		0.01 hr		
START-UP		0.03 hr		
SHUT-DOWN		96.9%		
PLANT PERFORMANCE		10.0%		
PRODUCTIVITY				
TOTAL SOIL PROCESSING RECORDS (2-S	EC and 20-SEC)	309		
TOTAL SOIL PROCESSING RECORDS (2	cion etc)	7		
NONPROCESS RECORDS (Test, calibrat	101, 610,	189		
20-SEC PROCESS RECORDS		0 MD>0 & MND=0		
TOTAL SORT		116 AD=0 & MD=0	& MND>0	
NO SORT		73 AD>0&0 <md<mn< td=""><td>Dmax&amp;MND<mndmax< td=""><td>•</td></mndmax<></td></md<mn<>	Dmax&MND <mndmax< td=""><td>•</td></mndmax<>	•
SOME SORT	ne	0		
UNEXPLAINED RECORD	0		UNEXPLAIN	PAUSE
0 <ad<1kbq &="" md="">0 &amp; AD=0</ad<1kbq>	_		TIME	TIME
& 0>QA			None	None
	17 14.2%			
ACT_P <5 kBq				

Printed on 04/26/93 at 06:36:37 AM

1,890

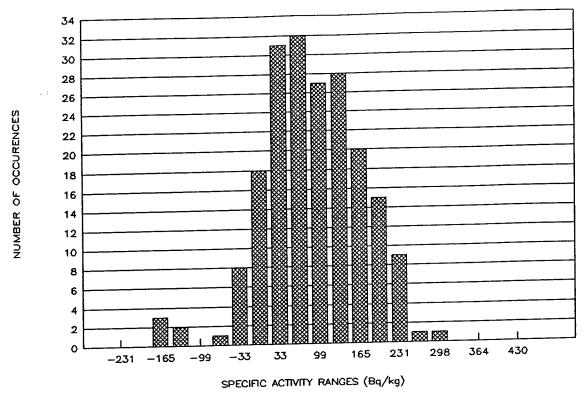
		2-SEC RECORD	S WITH S	ORTS		120	(ACT_P	>0 kBq)			
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR					
		2	DETECTO	RS	24		80.0%				
		3	DETECTO	RS	6		20.0%				
		4	DETECTO	RS	0		0.0%				
		5	DETECTO	RS	0		0.0%				
		6	DETECTO	RS	0		0.0%				
		7	DETECTO	RS	0		0.0%				
		8	DETECTO	RS	0		0.0%				
		T	OTAL			30					
		NET 2-SEC RE	CORDS WI	TH SORTS		90					
		2-SEC PERIOD				1,800					
		AVG TIME BET	WEEN 2-SI	EC SORTS		42.0	sec				
1-GATE	SORTS	63	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
DETECTR		FREQ%	(Bq)		(Bq/kg)			(Bq)	(#)		(kBq)
								•			
1	2	3.2%	-14000	0	-231			4000	6	5.0%	4
2	15	23.8%	-12000	0	-198			8000	50	41.7%	8
3	7	11.1%	-10000	3	-165			12000	18	15.0%	12
4	11	17.5%	-8000	2	-132			16000	10	8.3%	16
5	16	25.4%	-6000	0	-99			20000	5	4.2%	20
6	10	15.9%	-4000	1	-66			24000	6	5.0%	24
7	2	3.2%	-2000	8	-33		:	28000	6	5.0%	28
8	0	0.0%	0	18	0		3	32000	2	1.7%	32
TOTAL	63		2000	31	33		3	36000	0	0.0%	36
			4000	32	66		4	40000	1	0.8%	40
2-GATE	SORTS	57	6000	27	99		4	44000	0	0.0%	44
DETECTR	SORTS	FREQ%	8000	28	132			48000	4	3.3%	48
8			10000	20	165			52000	2	1.7%	. 52
9	5	8.8%	12000	15	198			56000	1	0.8%	56
10	10	17.5%	14000	9	231			50000	1	0.8%	60
11	12	21.1%	16000	1	264			54000	1	0.8%	64
12	15	26.3%	18000	1	298			68000	0	0.0%	68
13	9	15.8%	20000	0	331			72000	1	0.8%	72
14	5	8.8%	22000	0	364			76000	0	0.0%	76
15	1	1.8%	24000	0	397			30000	0	0.0%	80
TOTAL	57		26000	0	430			34000	0	0.0%	84
			>28000	0	0			34000	6	5.0%	>84
			TOTAL	196			1	TOTAL	120		
SUMMARY		OLE EVENTS	447		CORTO DY	ONE C4	TE OU!	,	47		
		CLE EVENTS	117		SORTS BY				63 57		
		ICLE EVENTS	54		SORTS BY	IWU UA	1169		31		
į	DISTRIBUT	ED EVENTS	0								

#### REC CODE EXPLANATION

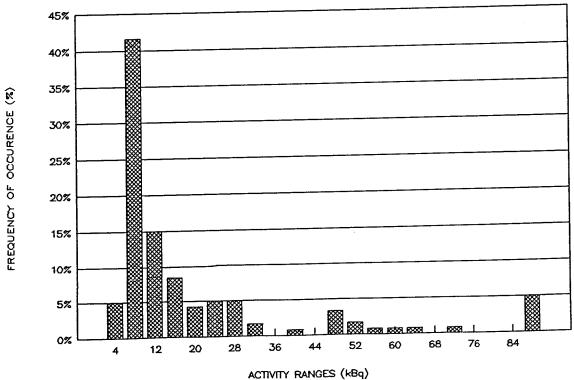
- 1.00 Source check (Soil on belt)
- 2.00 Empty belt

2-SEC COUNT PERIODS

SORTER 2 LOG DATA FOR 24-Apr-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 24-Apr-93



A-118

SORTER 1 23-Apr-93				·
AVERAGE BACKGROUND COUNT RATE	0.77 ± 0	.05 c/sec		
SORTER SOIL DENSITY	1.3 tons/m <sup>3</sup>			
GROUND SOIL DENSITY	1.65 tons/m <sup>3</sup>			
		CONTAMINATED	CLEAN	
MASS TOTAL		1.17 tons	113.8 tons	
MAXIMUM/SORT		60.5 kg	60.5 kg	
MINIMUM/SORT		0.8 kg	54.5 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY				99.0%
EQUIVALENT SOIL-IN-GROUND		0.93 yd³	90.2 yd <sup>3</sup>	91.2 yd3/day
DARTICLE ACTIVITY (MAVIMIN ESTIMATI	=1			
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	= 7	12,559 kBq		
TOTAL	•	605 kBq		
MAXIMUM/SORT MINIMUM/SORT		2.3 kBq		
MINIMUM/ SOKI				
DISPERSED + PARTICLE (REALISTIC ES	TIMATE) ACTIVITY	5,689 kBq	6,619 kBq	
MAXIMUM/SORT	•	415 kBq	20 kBq	
MINIMUM/SORT		0 Bq	-11 kBq	
SPECIFIC ACTIVITY		4,866 Bq/kg	58 Bq/k	g
WORK HISTORY				
WORK DAY START	05:56 AM	WORK DAY END	05:30 PM	
PLANT START-UP	05:56 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:25 AM	END SOIL PROCESSING	04:58 PM	
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr	
WORK HOURS		` 11.6 hr		
AVAILABLE HOURS		11.6 hr		
	RS (total 20-sec records)	10.56 hr		
DOWN-TIME	73 (total 20 300 1000 ds)	1.01 hr		
TOTAL SYSTEM PAUSE		0.47 hr		
NONAVAILABLE HOURS		0.0 hr		
START-UP		0.49 hr		
SHUT-DOWN		0.53 hr		
PLANT PERFORMANCE		91.3%		
PRODUCTIVITY		91.3%		
TOTAL SOIL PROCESSING RECORDS (2-S	EC and 20-SEC)	2,860		
NONPROCESS RECORDS (Test, calibrat		7		
20-SEC PROCESS RECORDS	,	1,900		
TOTAL SORT		1 MD>0 & MND=0		
NO SORT		1,178 AD=0 & MD=0	& MND>0	
SOME SORT		721 AD>0&0 <md<mni< td=""><td></td><td></td></md<mni<>		
UNEXPLAINED RECORD	S	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	2		UNEXPLAIN	PAUSE
AD=0 &			TIME	TIME
AD<0 &			11:12:18	05:57
ACT_P <5 kBq	317 33.0%		16:11:58	

2-SEC COUNT PERIODS	19,	000	
2-SEC RECORDS WITH SORTS		960 (ACT_P >0 kBd	<b>4</b> )
2-SEC RECORDS WITH POSITIVES	IN >1 DETEC	TOR	
2 DETECTORS	218	85.5%	
3 DETECTORS	33	12.9%	
4 DETECTORS	4	1.6%	
5 DETECTORS	0	0.0%	
6 DETECTORS	0	0.0%	
7 DETECTORS	0	0.0%	
8 DETECTORS	0	0.0%	
TOTAL		255	
NET 2-SEC RECORDS WITH SORTS		705	
2-SEC PERIODS WITH NO SORTS	18,	295	
AVG TIME BETWEEN 2-SEC SORTS	5	3.9 sec	

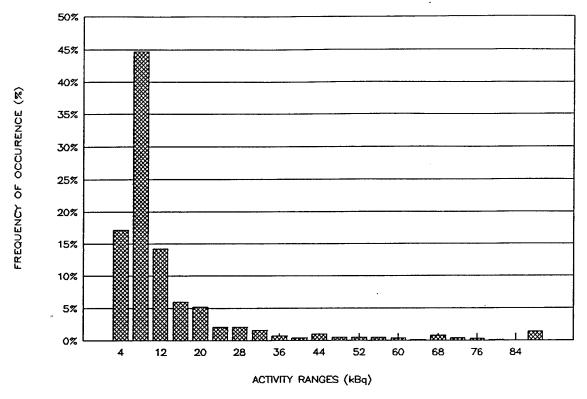
1-GATE S	CORTS	477	ACT ND	NUMBER	SPEC_A	ACT_P		FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
DETECTA	30113	1114	<b>V</b> = - <b>J</b> •						
1	13	2.7%	-14000	1	-231	4000	165	17.2%	4
2	52	10.9%	-12000	2	-198	8000	429	44.7%	8
3	76	15.9%	-10000	4	-165	12000	137	14.3%	12
4	74	15.5%	-8000	0	-132	16000	57	5.9%	16
5	90	18.9%	-6000	4	-99	20000	50	5.2%	20
6	90	18.9%	-4000	18	-66	24000	20	2.1%	24
7	67	14.0%	-2000	69	-33	28000	20	2.1%	28
8	15	3.1%	0	199	0	32000	15	1.6%	32
TOTAL	477	3	2000	349	33	36000	6	0.6%	36
TOTAL	711		4000	439	66	40000	4	0.4%	40
2-GATE	PODTS	483	6000	411	99	44000	9	0.9%	44
DETECTR	SORTS	FREQ%	8000	222	132	48000	5	0.5%	48
9E1EC1K	30113	111247	10000	128	165	52000	5	0.5%	52
9	41	8.5%	12000	45		56000	5	0.5%	56
10	70	14.5%	14000	14	231	60000	4	0.4%	60
11	78	16.1%	16000	1	264	64000	1	0.1%	64
12	92	19.0%	18000	0	298	68000	7	0.7%	68
13	94	19.5%	20000	1	331	72000	4	0.4%	72
14	69	14.3%	22000	C		76000	3	0.3%	76
15	39	8.1%	24000	0	397	80000	1	0.1%	80
	483	0.12	26000	0	430	84000	0	0.0%	84
TOTAL	403		>28000	0	0	>84000	13	1.4%	>84
			TOTAL	1907	,	TOTAL	960		
SUMMARY	TOTALC		10	*					
	HOT PARTIC	F EVENTS	988		SORTS BY	ONE GATE ONLY	477	•	
	MULTIPARTI		462			TWO GATES	483	;	
	DISTRIBUTE		80						
	D 19 IKIBUIEI	PEACUIS	50						

#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

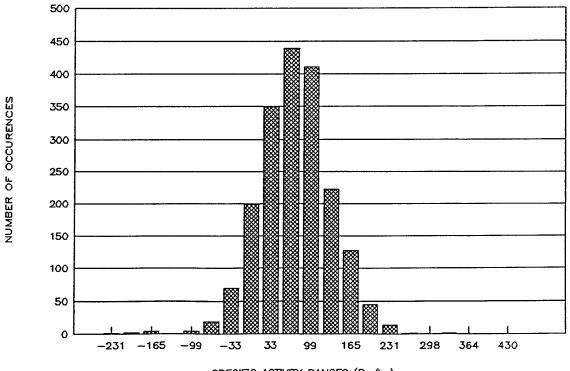
## JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 23-Apr-93



## CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 23-Apr-93



SPECIFIC ACTIVITY RANGES (Bq/kg)

A-121

SORTER 2 23-Apr-93				
AVERAGE BACKGROUND COUNT RATE	0.80 ± 0.0	03 c/sec		
SORTER SOIL DENSITY	1.3 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³			
GROOND SOIL BENSIII		CONTAMINATED	CLEAN	
MASS TOTAL		1.19 tons	113.7 tons	
MAXIMUM/SORT		60.5 kg	60.5 kg	
MINIMUM/SORT		0.8 kg	53.7 kg	
FILL COLOR OF COLOR				99.0%
WEIGHT RECOVERY OR VOLUME RECOVERY			00.0	
EQUIVALENT SOIL-IN-GROUND		0.95 yd³	90.2 yd³	91.1 yd3/day
ENGLANCENT SOLE IN CHASH				
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	)			
TOTAL		14,603 kBq		
MAXIMUM/SORT		634 kBq		
MINIMUM/SORT		2.2 kBq		
HIRITION SON.			F 7/4 LD.	
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTIVITY	6,796 kBq	5,741 kBq	
MAXIMUM/SORT		425 kBq	18 kBq	
MINIMUM/SORT		0 Bq	-17 kBq	
SPECIFIC ACTIVITY		5,690 Bq/kg	50 Bq/kg	
Great to Notice				
WORK HISTORY			as 70 ou	
HORK DAY START	05:56 AM	WORK DAY END	05:30 PM	
PLANT START-UP	05:56 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:25 AM	END SOIL PROCESSING		
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr	
201011				
WORK HOURS		11.6 hr		
AVAILABLE HOURS		11.6 hr		
ACTUAL PROCESS HOU	RS (total 20-sec records)	10.55 hr		
DOWN-TIME		1.02 hr		
TOTAL SYSTEM PAUSE		0.47 hr		
NONAVAILABLE HOURS		0.0 hr		
START-UP		0.49 hr		
SHUT-DOWN		0.53 hr		
PLANT PERFORMANCE		91.2%		
PRODUCTIVITY		91.2%		
		2 000		
TOTAL SOIL PROCESSING RECORDS (2-S	EC and 20-SEC)	2,898		
NONPROCESS RECORDS (Test, calibrat	ion, etc)	8		
20-SEC PROCESS RECORDS		1,899		
TOTAL SORT		1 MD>0 & MND=0 1,181 AD=0 & MD=0		
NO SORT		717 AD>0&0 <md<mn< td=""><td>Dwax<b>swn</b>D<wndwax< td=""><td></td></wndwax<></td></md<mn<>	Dwax <b>swn</b> D <wndwax< td=""><td></td></wndwax<>	
SOME SORT			PHENDING AMOUNT	
UNEXPLAINED RECORD		0	UNEXPLAIN	PAUSE
0 <ad<1kbq &="" md="">0</ad<1kbq>	1		TIME	TIME
& 0=0A			09:31:38	05:57
AD<0 &			U7.51.50	2 <b>-</b>
ACT_P <5 kBq	298 29.8%			

18,990

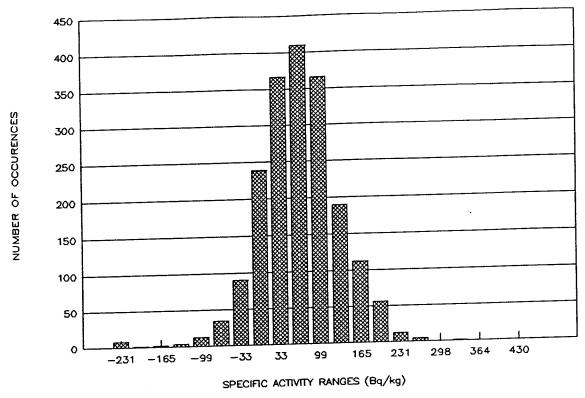
	2-320 00	ONI PERIODS				10,770					
		2-SEC RECORD					_	) >0 kBq)			
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR					
		2	DETECTO	RS	212		82.8%				
		3	DETECTO	RS	39		15.2%				
		4	DETECTO	RS	4		1.6%				
		5	DETECTO	RS	1		0.4%				
		6	DETECTO	RS	0		0.0%				
		7	DETECTO	RS	0		0.0%				
		8	DETECTO	RS	0		0.0%				
		т	OTAL			256					
		NET 2-SEC RE	CORDS WI	TH SORTS		743					
		2-SEC PERIOD	S WITH N	O SORTS		18,247					
		AVG TIME BET	WEEN 2-S	EC SORTS		51.1	sec				
1-GATE	SORTS	529	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
DETECT	R SORTS		(Bq)		(Bq/kg)			(Bq)	(#)		(kBq)
1	15	2.8%	-14000	8	-231			4000	145	14.5%	4
2	73	13.8%	-12000	1	-198			8000	418	41.8%	8
3	98	18.5%	-10000	2	-165			12000	156	15.6%	12
4	99	18.7%	-8000	3	-132			16000	74	7.4%	16
5	113	21.4%	-6000	12	-99			20000	49	4.9%	20
· 6	90	17.0%	-4000	34	-66			24000	34	3.4%	24
7	36	6.8%	-2000	90	-33			28000	17	1.7%	28
8	5	0.9%	0	239	0			32000	15	1.5%	32
TOTAL	529		2000	367	33			36000	11	1.1%	36
			4000	410	66			40000	10	1.0%	40
2-GATE	SORTS	470	6000	366	99			44000	12	1.2%	44
DETECT	R SORTS	FREQ%	8000	190	132			48000	7	0.7%	48
8			10000	112	165			52000	8	0.8%	52
9	34	7.2%	12000	56	198			56000	4	0.4%	56
10	72	15.3%	14000	12	231			60000	6	0.6%	60
11	88	18.7%	16000	4	264			64000	6	0.6%	64
12	98	20.9%	18000	0	298			68000	2	0.2%	68
13		19.8%	20000	1	331			72000	1	0.1%	72
14	68	14.5%	22000	0	364			76000	2	0.2%	76
15	17	3.6%	24000	0	397			80000	1	0.1%	80
TOTAL	470		26000	0	430			84000	1	0.1%	84
			>28000	0	0		>	84000	20	2.0%	>84
			TOTAL	1907				TOTAL	999		
SUMMAR	Y TOTALS										
		ICLE EVENTS	987		SORTS BY	ONE G	ATE ONL	Y.	529		
	MULTIPAR	TICLE EVENTS	497		SORTS BY	TWO G	ATES		470		
		TED EVENTS	77								

#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt

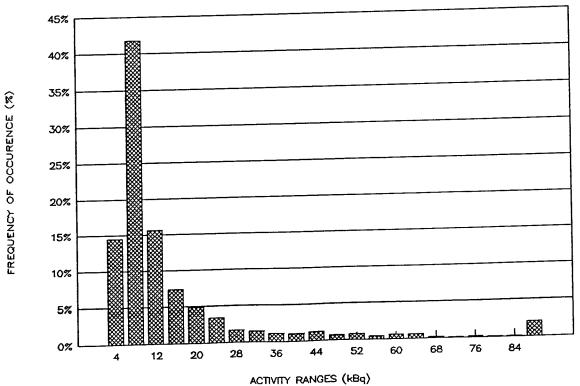
2-SEC COUNT PERIODS

SORTER 2 LOG DATA FOR 23-Apr-93



# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 23-Apr-93



A-124

SORTER 1 22-Apr-93				
AVERAGE BACKGROUND COUNT RATE	0.76 ± 0.	.04 c/sec		
SORTER SOIL DENSITY	1.3 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³			
		CONTAMINATED	CLEAN	
MASS TOTAL		1.13 tons	112.4 tons	3
MAXIMUM/SORT		60.5 kg	60.5 kg	
MINIMUM/SORT		0.8 kg	52.2 kg	
WEIGHT RECOVERY OR VOLUME RECOVER	γ			99.0%
EQUIVALENT SOIL-IN-GROUND	•	0.89 yd³	89.1 yd³	90.0 yd3/day
ENGIANCEM! SOLE IN GROOMS		•	•	• •
PARTICLE ACTIVITY (MAXIMUM ESTIMA	TE)			
TOTAL	_	16,094 kBq		
MAXIMUM/SORT		1,038 kBq		
MINIMUM/SORT		2.2 kBq		
DISPERSED + PARTICLE (REALISTIC E	STIMATE) ACTIVITY	7,422 kBq	6,385 kBq	
MAXIMUM/SORT		785 kBq	16 kBq	
MINIMUM/SORT		0 Bq	-7 kBq	
SPECIFIC ACTIVITY		6,582 Bq/kg	57 8q/i	(g
WORK HISTORY				
WORK DAY START	05:56 AM	WORK DAY END	05:30 PM	
PLANT START-UP	05:56 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:33 AM	END SOIL PROCESSING	04:58 PM	
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr	
WORK HOURS		11.6 hr		
AVAILABLE HOURS		11.6 hr		
	URS (total 20-sec records)	10.42 hr		
DOWN-TIME	5 (cotat <b>2</b> 0 000 t 300. 20)	1.14 hr		
TOTAL SYSTEM PAUS	E	0.60 hr		
NONAVAILABLE HOUR		0.0 hr		•
START-UP		0.62 hr		
SHUT-DOWN		0.53 hr		
PLANT PERFORMANCE		90.1%		
PRODUCTIVITY		90.1%		
TOTAL SOIL PROCESSING RECORDS (2-	SEC and 20-SEC)	2,828		
NONPROCESS RECORDS (Test, calibra		4		
20-SEC PROCESS RECORDS		1,876		
TOTAL SORT		1 MD>0 & MND=0		
NO SORT		1,218 AD=0 & MD=0 8	MND>0	
SOME SORT		657 AD>0&0 <md<mnd< td=""><td>max&amp;MND<mndmax< td=""><td>(</td></mndmax<></td></md<mnd<>	max&MND <mndmax< td=""><td>(</td></mndmax<>	(
UNEXPLAINED RECOR	DS	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	1		UNEXPLAIN	PAUSE
AD=0 &	MD 0		TIME	TIME
& 0>DA	MD 0		10:46:26	05:57
ACT_P <5 k8q	297 31.2%			

952 (ACT\_P >0 kBq)

18,760

		2-SEC RECORD	S WITH PO	OSITIVES	IN >1 DE	TECTOR					
			DETECTO		201		86.6%				
		3	DETECTO	RS	28		12.1%				
		4	DETECTO	RS	3		1.3%				
		5	DETECTO	RS	0		0.0%				
		6	DETECTO	RS	0		0.0%				
		7	DETECTO	RS	0		0.0%				
		8	DETECTO	RS	0		0.0%				
		τ	OTAL			232					
		NET 2-SEC RE	CORDS WI	TH SORTS		720					
		2-SEC PERIOD	S WITH N	SORTS		18,040					
		AVG TIME BET	WEEN 2-SI	EC SORTS		52.1	sec				
1-GATE	SORTS	473	ACT_ND	NUMBER	SPEC_A			ACT_P		FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)
								4000	455	44 79	4
1	14	3.0%	-14000	0	-231			4000	155	16.3%	8
2	50	10.6%	-12000	1	-198	,		8000	374	39.3%	12
3	73	15.4%	-10000	0	-165			12000	134	14.1% 7.2%	16
4	81	17.1%	-8000	0	-132			16000	69	4.2%	20
5	100		-6000	4	-99			20000	40		24
6	81	17.1%	-4000	11	-66			24000	30		28
7	57	12.1%	-2000	71	-33			28000	23	2.4%	32
8	17	3.6%	0	188	0			32000	24 14	2.5% 1.5%	36
TOTAL	473		2000	346	33			36000	15	1.6%	40
			4000	462	66			40000	11	1.2%	44
2-GATE	SORTS	479	6000	400	99			44000	11	1.2%	48
DETECTR	SORTS	FREQ%	8000	253	132			48000	3		52
8			10000	110	165			52000 56000	7		56
9	22		12000	22	198			60000	4	0.4%	60
10	66		14000	8				64000	4		64
11	74		16000	4	264			68000	3		68
12	101		18000	0				72000	1		72
13	98		20000	0				76000	1		76
14	77		22000	0				80000	3		80
15	41		24000	_				84000	0		84
TOTAL	479		26000	0				>84000	26		>84
			>28000	1880				TOTAL	952		
			TOTAL	1000							
SUMMARY	TOTALS	TOLE EVENTS	968		SORTS BY	ONE G	ATE ON	LY	473		
		ICLE EVENTS	431		SORTS BY				479		
		TICLE EVENTS	,431 80		301.10 01						
	DIZIKIBO	TED EVENTS	50								

#### REC CODE EXPLANATION

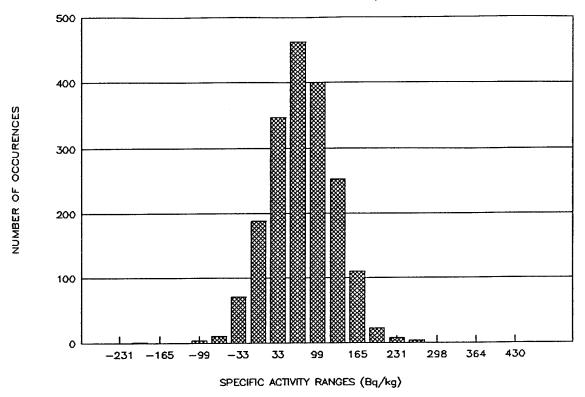
1.00 Source check (Soil on belt)

2.00 Empty belt

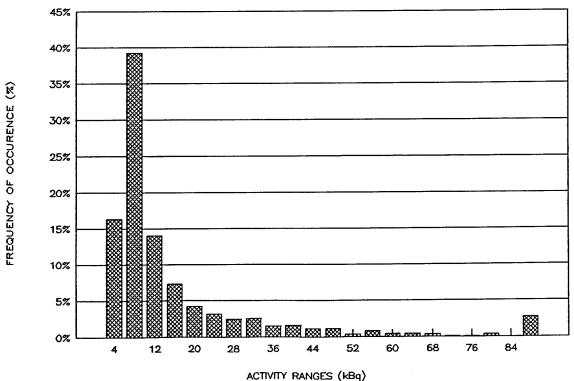
2-SEC COUNT PERIODS

2-SEC RECORDS WITH SORTS

SORTER 1 LOG DATA FOR 22-Apr-93



## JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 22-Apr-93



SORTER 2	22-Apr-93									
AVERAGE BACKGR	OUND COUNT RATE		0.80	±	0.02	c/sec				
SORTER SOIL DE			1.3	tons/m³	3					
GROUND SOIL DE			1.65	tons/m³				CI EAN		
					1	CONTAM		CLEAN 112.2	tons	
MASS TOTAL							tons			
MUMIXAM	/SORT					5.3	_	60.5 55.2		
MINIMUM						8.0	kg	33.2	<b>~</b> 9	
										99.0%
WEIGHT RECOVER	Y OR VOLUME RECOVERY					0.91	, adS	88.9	vd3	89.9 yd3/day
EQUIVALENT SOI	L-IN-GROUND					0.91	yu	55.7	,-	•
PARTICLE ACTIV	ITY (MAXIMUM ESTIMATE	)				17,883	LRa .			
TOTAL						•	kBq			
MAXIMUN	I/SORT						kBq			
MINIMU	I/SORT					2.0	, vad			
						7,973	k kRa	6,425	kBq	
DISPERSED + PA	ARTICLE (REALISTIC EST	IMATE) ACITY	1111			•	kBq	17	kBq.	
MAXIMU	1/SORT						) Bq	-8	kBq	
MINIMU	1/SORT						Bq/kg	57	Bq/kg	
SPECIF	IC ACTIVITY					0,750	, oq 13			
WORK HISTORY										
	AY START	05:56 AM					AY END	05:30 PM		
	START-UP	05:56 AM					SHUT-DOWN	05:30 PM		
	SOIL PROCESSING	06:33 AM					OIL PROCESSING			
LUNCH		11:30 AM				LUNCH	PERIOD	0.0	nr	
							11.6 hr			
	WORK HOURS						11.6 hr			
	AVAILABLE HOURS ACTUAL PROCESS HOU	es (total 20	-sec f	ecords)	)		10.41 hr			
	DOWN-TIME	K3 (totat 25					1.16 hr			
	TOTAL SYSTEM PAUSE						0.60 hr			
	NONAVAILABLE HOURS						0.0 hr			
	START-UP						0.63 hr			
	SHUT-DOWN						0.53 hr			
	PLANT PERFORMANCE						90.0%			
	PRODUCTIVITY						90.0%			
		,	-a.				2,899			
TOTAL SOIL PR	OCESSING RECORDS (2-S	EC and 20-SE	C)				7			
	CORDS (Test, calibrat	ion, etc)				1,87	3			
20-SEC	PROCESS RECORDS						0 MD>0 & MND=0			
	TOTAL SORT						4 AD=0 & MD=0			
	NO SORT					71	9 AD>0&0 <md<mn< td=""><td>Dmax&amp;MND⊲</td><td>MNDmax</td><td></td></md<mn<>	Dmax&MND⊲	MNDmax	
	SOME SORT	ie.					0			
	UNEXPLAINED RECORD	2						UNEXPLA	IN	PAUSE
	0 <ad<1kbq &="" md="">0</ad<1kbq>	_						TIME		TIME
	AD=0 & AD<0 &							10:41:0	7	05:57
	•	288	28.1	1%				12:10:0	7	
	ACT_P <5 kBq		,							

1,026 (ACT\_P >0 kBq)

18,730

		S-2EC KECOKD				-	.o (no	, o vod)			
		2-SEC RECORD	S WITH P	OSITIVES		TECTO					
		2	DETECTO	RS	221		83.7%				
		3	DETECTO	RS	38		14.4%				
		4	DETECTO	RS	5		1.9%				
		5	DETECTO	RS	0		0.0%				
		6	DETECTO	RS	0		0.0%				
		7	DETECTO	RS	0		0.0%				
		8	DETECTO	RS	0		0.0%				
		τ	OTAL			26					
		NET 2-SEC RE	CORDS WI	TH SORTS		76					
		2-SEC PERIOD				17,96					
		AVG TIME BET	WEEN 2-S	EC SORTS		49.	2 sec				
1-GATE	SORTS	535	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQX	ACT_P
DETECT	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)
1	16	3.0%	-14000	0	-231			4000	125	12.2%	4
2	58		-12000	2				8000	435	42.4%	8
3	95		-10000	0	-165			12000	155	15.1%	12
4	112		-8000	1	-132			16000	72	7.0%	16
5	113		-6000	3	-99			20000	52	5.1%	20
6	84		-4000	20	-66			24000	33	3.2%	24
7	50		-2000	71	-33			28000	18	1.8%	28
8	7	1.3%	0	203	0			32000	20	1.9%	32
TOTAL	535		2000	376	33			36000	17	1.7%	36
			4000	419	66			40000	12	1.2%	40
2-GATE	SORTS	491	6000	362	99			44000	9	0.9%	44
DETECT		FREQ%	8000	247	132			48000	6	0.6%	48
8			10000	99	165			52000	6	0.6%	52
9	32	6.5%	12000	46	198			56000	5	0.5%	56
10	63	12.8%	14000	23	231			60000	7	0.7%	60
11	89	18.1%	16000	6	264			64000	6	0.6%	64
12	108	22.0%	18000	2	298			68000	5	0.5%	68
13	105	21.4%	20000	0	331			72000	8	0.8%	72
14	70	14.3%	22000	0	364			76000	2	0.2%	76
15	24	4.9%	24000	0	397			80000	3	0.3%	80
TOTAL	491		26000	0	430			84000	0	0.0%	84
			>28000	0	0			>84000	30	2.9%	>84
			TOTAL	1880				TOTAL	1026		
SUMMAR'	Y TOTALS							,			
		ICLE EVENTS	1008		SORTS BY			LY	535		
		TICLE EVENTS	496		SORTS B	r TWO	GATES		491		
	DISTRIBU	TED EVENTS	0								

#### REC CODE EXPLANATION

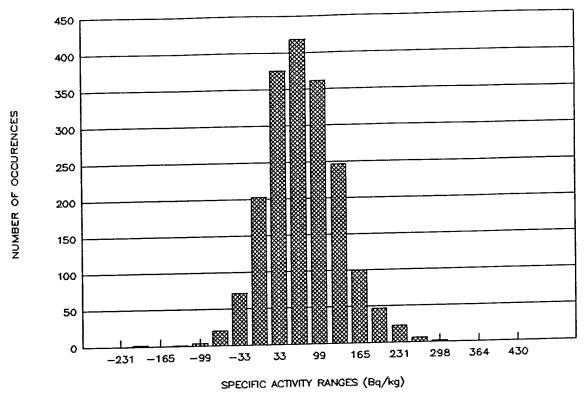
1.00 Source check (Soil on belt)

2.00 Empty belt

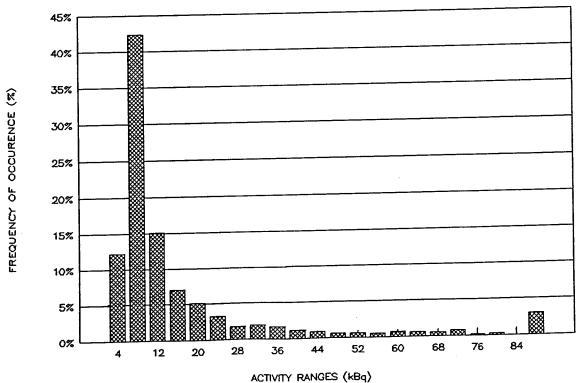
2-SEC COUNT PERIODS

2-SEC RECORDS WITH SORTS

SORTER 2 LOG DATA FOR 22-Apr-93



## JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 22-Apr-93



A-130

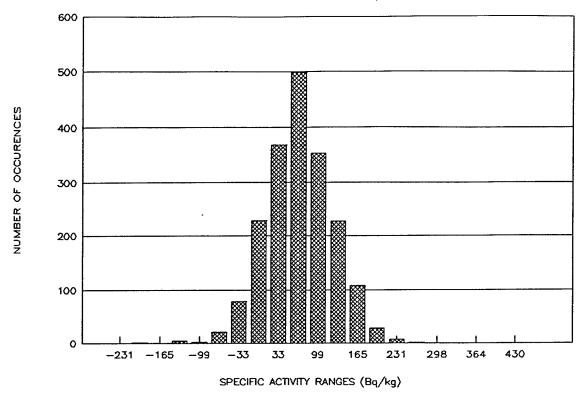
SORTER 1 21-Apr-93				
AVERAGE BACKGROUND COUNT RATE	0.77 ±	0.04 c/sec		
SORTER SOIL DENSITY	1.3 tons/m	<b>3</b>		
GROUND SOIL DENSITY	1.65 tons/m	,		
		CONTAMINATED	CLEAN	
MASS TOTAL		1.14 tons	114.9 ton	s
MAXIMUM/SORT		7.6 kg	60.5 kg	
MINIMUM/SORT		0.8 kg	53 kg	
WEIGHT RECOVERY OR VOLUME RECOVER	Y			99.0%
EQUIVALENT SOIL-IN-GROUND		0.90 yd3	91.1 yd³	92.0 yd3/day
PARTICLE ACTIVITY (MAXIMUM ESTIMA	IE)			
TOTAL	,	15,028 kBq		
MAXIMUM/SORT		410 kBq		
MINIMUM/SORT		2.4 kBq		
			( 000 Lp.	
DISPERSED + PARTICLE (REALISTIC E	STIMATE) ACTIVITY	6,423 kBq	6,082 kBq	
MAXIMUM/SORT		234 k8q	14 kBq	
MINIMUM/SORT		0 Bq	-9 k8q	
SPECIFIC ACTIVITY		5,656 Bq/kg	53 Bq/	Kg
WORK HISTORY				
WORK DAY START	05:54 AM	WORK DAY END	05:30 PM	
PLANT START-UP	05:54 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:14 AM	END SOIL PROCESSING		
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr	
WORK HOURS		11.6 hr		
AVAILABLE HOURS		11.6 hr		
ACTUAL PROCESS HO	NURS (total 20-sec records)	10.65 hr		
DOWN-TIME		0.95 hr		
TOTAL SYSTEM PAUS	E	0.40 hr		
NONAVAILABLE HOUR	s	0.0 hr		
START-UP		0.34 hr		
SHUT-DOWN		0.53 hr		
PLANT PERFORMANCE		91.8%		
PRODUCTIVITY		91.8%		
TOTAL SOIL PROCESSING RECORDS (2-	SEC and 20-SEC)	2,978		
NONPROCESS RECORDS (Test, calibra	ition, etc)	10		
20-SEC PROCESS RECORDS		1,917		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		1,224 AD=0 & MD=0	& MND>0	
SOME SORT		693 AD>0&0 <md<mn< td=""><td>Omax&amp;MND<mndma< td=""><td>x</td></mndma<></td></md<mn<>	Omax&MND <mndma< td=""><td>x</td></mndma<>	x
UNEXPLAINED RECOR	DS	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	4		UNEXPLAIN	PAUSE
AD=0 &	MD 0		TIME	TIME
AD<0 8	MD 0		07:03:39	05:54
ACT_P <5 kBq	288 27.1%		11:24:14	08:13

•	SEC COUNT	0001000				19,170					:07:54	10
2-3		EC RECORDS	LITH SO	RTS			(ACT_P	>0 kBq)		14	:37:34	
	2-3	EC RECORDS	. WITH PO	SITIVES	IN >1 DE							
	2-3		DETECTOR		246		90.1%					
			DETECTOR		23		8.4%					
			DETECTOR		4		1.5%					
			DETECTOR		0		0.0%					
			DETECTOR		0		0.0%					
			DETECTOR		0		0.0%					
		-	DETECTOR		0		0.0%					
			OTAL			273						
	410-7	T 2-SEC RE		H SORTS		788						
		SEC PERIODS				18,382						
		G TIME BET				48.7	sec					
	WA	a time per	50									
-GATE SC	DTC	529	ACT_ND	NUMBER	SPEC_A	•		ACT_P		FREQ%	ACT_P	
ETECTR	SORTS	FREQ%	(Bq)		(Bq/kg)			(Bq)	(#)		(kBq)	
CICCIR	50713		- 1-							41 141	,	
1	14	2.6%	-14000	0	-231			4000	155	14.6%	4 8	
2	58	11.0%	-12000	1	-198			8000	439	41.4%	12	
3	78	14.7%	-10000	0	-165			12000	143	13.5%	16	
4	93	17.6%	-8000	5	-132			16000	95	9.0%	20	
5	107	20.2%	-6000	2	-99			20000	51	4.8%	24	
6	87	16.4%	-4000	21	-66			24000	43	4.1%	28	
7	67	12.7%	-2000	78	-33			28000	34	3.2%	<b>3</b> 2	
8	25	4.7%	0	228	0			32000	21	2.0%	36	
TOTAL	529		2000	369	33			36000	15	0.6%	40	
			4000	499	66			40000	6	0.6%	44	
2-GATE S	ORTS	532	6000	354	99			44000	6 5		48	
DETECTR	SORTS	FREQ%	8000	227				48000	5		52	
8			10000	107				52000	6		56	
9	35	6.6%	12000	28				56000	5		60	
10	78	14.7%	14000	7				60000	6		64	
11	99	18.6%	16000	1				64000	5		68	
12	82	15.4%	18000	0				68000	1		72	
13	107	20.1%	20000	0				72000	1		76	
14	82	15.4%		0				76000 80000	ď		80	
15	49	9.2%		0				84000	2			
TOTAL	532		26000	0	_			>84000	17			
			>28000	0		J		TOTAL	1061		-	
			TOTAL	1927	7			TOTAL	.00	•		
SUMMARY					00570	V ONE	CATE O	VI Y	529	,		
	OT PARTIC		1054		SORTS I			1	537			
		CLE EVENTS			SORTS 1	51 1 <b>W</b> U	UN159		,,,	-		
	ISTRIBUTE	D EVENTS	0									

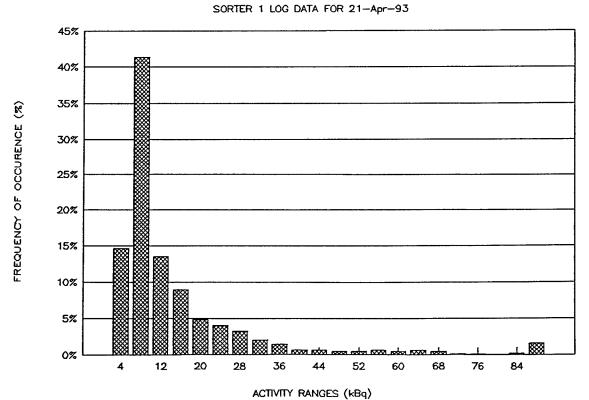
1.00 Source check (Soil on belt)

2.00 Empty belt

SORTER 1 LOG DATA FOR 21-Apr-93



## JA SOIL CLEANUP PLANT HOT PARTICLES



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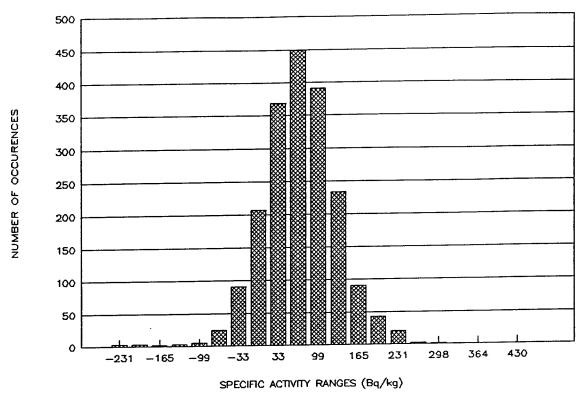
SORTER 2 21-Apr-93				
THE TANK OF THE PARTY OF THE PA	0.80 ±	0.02 c/sec		
AVERAGE BACKGROUND COUNT RATE	1.3 tons/	m³		
SORTER SOIL DENSITY	1.65 tons/	m³		
GROUND SOIL DENSITY		CONTAMINATED	CLEAN	
		1.12 tons	115.3 tons	
MASS TOTAL		5.3 kg	60.5 kg	
MAXIMUM/SORT		0.8 kg	55.2 kg	
MINIMUM/SORT				
AND THE RECOVERY				99.0%
WEIGHT RECOVERY OR VOLUME RECOVERY		0.89 yd³	91.4 yd <sup>3</sup>	92.3 yd3/day
EQUIVALENT SOIL-IN-GROUND				
CHAVIMIN ECTIMATE	`			
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	,	15,557 kBq		
TOTAL		477 kBq		
MAXIMUM/SORT		2.3 kBq		
MINIMUM/SORT		•		
	·water ACTIVITY	6,874 kBq	6,229 kBq	
DISPERSED + PARTICLE (REALISTIC EST	IMAIE) MCITATIT	407 kBq	16 kBq	
MAXIMUM/SORT		0 Bq	-10 kBq	
MINIMUM/SORT		6,144 Bq/kg	54 Bq/kg	
SPECIFIC ACTIVITY		0,111.04.10		
WORK HISTORY		CONT. DAY END	05:30 PM	
WORK DAY START	05:54 AM	WORK DAY END	05:30 PM	
PLANT START-UP	05:54 AM	PLANT SHUT-DOWN END SOIL PROCESSING		
START SOIL PROCESSING	06:16 AM		0.0 hr	
LUNCH START	11:30 AM	LUNCH PERIOD	0.0	
		11.6 hr		
WORK HOURS		11.6 hr		
AVAILABLE HOURS				
ACTUAL PROCESS HOU	RS (total 20-sec record	0.91 hr		
DOWN-TIME		0.33 hr		
TOTAL SYSTEM PAUSE		0.0 hr		
NONAVAILABLE HOURS		0.37 hr		
START-UP		0.55 hr		
SHUT-DUH2		92.1%		
PLANT PERFORMANCE		92.1%		
PRODUCTIVITY		72.10		
TOTAL SOIL PROCESSING RECORDS (2-S	EC and 20-SEC)	2,888		
NONPROCESS RECORDS (Test, calibrat	ion. etc)	13		
20-SEC PROCESS RECORDS		1,924		
TOTAL SORT		0 MD>0 & MND=0	)	
NO SORT		1,198 AD=0 & MD=0	& MND>0	
SOME SORT		726 AD>0&0 <md<m< td=""><td>IDmax&amp;MND<mndmax< td=""><td></td></mndmax<></td></md<m<>	IDmax&MND <mndmax< td=""><td></td></mndmax<>	
UNEXPLAINED RECORD	s	0		~
0 <ad<1kbq &="" md="">0</ad<1kbq>	3		UNEXPLAIN	PAUSE
# D=0	_		TIME	TIME
AD<0 &			07:27:20	05:54
ACT_P <5 kBq	289 30.0%		07:50:00	
ACI_F 3 Kbd				

2-SEC COUNT PERIODS						19,240			1	2:10:40
2-SEC RECORDS WIT				ORTS			P >0 kBq:	)		
		2-SEC RECORD	IN >1 DE	_						
		2	189	85.1	K					
3 DETECTORS					29	13.1	<b>K</b>			
4 DETECTORS					4	1.8	4			
		5	DETECTO	RS	0	0.0	4			
6 DETECTORS					0	0.0	<b>K</b>			
7 DETECTORS					0	0.0	<b>K</b>			
8 DETECTORS					0	0.0	4			
		Ţ			222					
NET 2-SEC RECORDS WITH SORT						742				
2-SEC PERIODS WITH NO SORTS						18,498				
AVG TIME BETWEEN 2-SEC SORTS						51.9 sec				
1-GATE SO	no re	491	ACT_ND	NI MRFP	SPEC_A		ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)		(Bq/kg)		(Bq)	(#)		(kBq)
DETECTA	30013	11124	(04)	<b>\</b>	(54 N3)		V- 4.	•		•
1	10	2.0%	-14000	3	-231		4000	131	13.6%	4
2	68	13.8%	-12000	3	-198		8000	417	43.3%	8
3	91	18.5%	-10000	2	-165		12000	145	15.0%	12
4	102	20.8%	-8000	3	-132		16000	. <b>77</b>	8.0%	16
5	92	18.7%	-6000	5	-99		20000	37	3.8%	20
6	75	15.3%	-4000	24	-66		24000	21	2.2%	24
7	43	8.8%	-2000	91	-33		28000	26	2.7%	28
8	10	2.0%	0	207	0		32000	15	1.6%	32
TOTAL	491		2000	369	33		36000	12		36
			4000	449	66		40000	10		40
2-GATE SORTS 473		6000	391	99		44000	5		44	
DETECTR	SORTS	FREQ%	8000	233	132		48000	13		48
8			10000	91	165		52000	2		52
9	22	4.7%	12000	43	198		56000	9		56
10	71	15.0%	14000	20	231		60000	11		60
11	116	24.5%	16000	2	264		64000	3		64
12	92	19.5%	18000	1	298		68000	1		68 73
13	. 91	19.2%	20000	0	331		72000	2		72 74
14	61	12.9%	22000	0	364		76000	2		76
15	20	4.2%	24000	0			80000		0.1%	80 •/
TOTAL	473		26000	0			84000	3		84
			>28000	0	0		>84000	21		>84
OURULA DE L	70T41 C		TOTAL	1937			TOTAL	964		
SUMMARY TOTALS  HOT PARTICLE EVENTS			979		CODIC DV	ONE GATE O	Wf Y	491		
MULTIPARTICLE EVENTS			485			TWO GATES	7 L I	473		
DISTRIBUTED EVENTS			465 0		~~ b!	. NO UNILS		71.3		
DIGITIONIED FACTOR A										

### REC CODE EXPLANATION

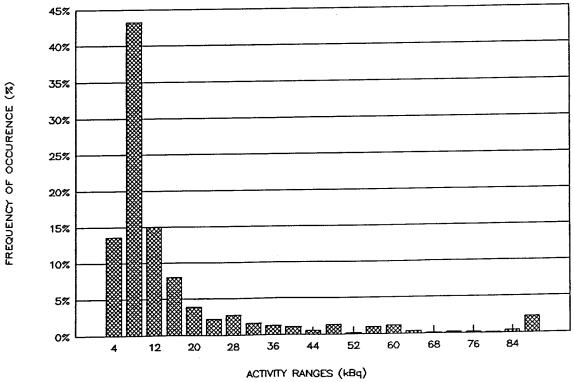
- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 21-Apr-93



# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 21-Apr-93



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SORTER 1 20-Apr-93				
AVERAGE BACKGROUND COUNT RATE	0.77 ±	0.04 c/sec		
SORTER SOIL DENSITY	1.2 tons/m³	1		
GROUND SOIL DENSITY	1.65 tons/m <sup>3</sup>			
		CONTAMINATED	CLEAN	
MASS TOTAL		1.24 tons	102.8 ton	s
MAXIMUM/SORT		58.7 kg	55.9 kg	
MINIMUM/SORT		0.7 kg	49.6 kg	
WEIGHT RECOVERY OR VOLUME RECOVE	RY			98.8%
EQUIVALENT SOIL-IN-GROUND		0.99 yd³	81.5 yd <sup>3</sup>	82.5 yd <sup>3</sup> /day
PARTICLE ACTIVITY (MAXIMUM ESTIM	ATFY			
TOTAL		17,377 kBq		
MAXIMUM/SORT		533 kBq		٠
MINIMUM/SORT		2.0 kBq		
			7 225 12	
DISPERSED + PARTICLE (REALISTIC	ESTIMATE) ACTIVITY	7,460 kBq	7,225 kBq	
MAXIMUM/SORT		437 kBq	17 kBq	
MINIMUM/SORT		0 Bq	-6 kBq	
SPECIFIC ACTIVITY		5,995 Bq/kg	70 Bq/	kg
WORK HISTORY				
WORK DAY START	06:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	06:00 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:35 AM	END SOIL PROCESSING	05:03 PM	
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr	
WORK HOURS		11.5 hr		
AVAILABLE HOURS		11.5 hr		
ACTUAL PROCESS H	OURS (total 20-sec records)	10.34 hr		
DOWN-TIME		1.16 hr		
TOTAL SYSTEM PAU	SE	0.58 hr		
NONAVAILABLE HOU	RS	0.0 hr		
START-UP		0.59 hr		
SHUT-DOWN		0.44 hr		
PLANT PERFORMANC	E	89.9%		
PRODUCTIVITY		89.9%		
TOTAL SOIL PROCESSING RECORDS (2	-SEC and 20-SEC)	2,998		
NONPROCESS RECORDS (Test, calibr		10		
20-SEC PROCESS RECORDS	• • •	1,861		
TOTAL SORT		1 MD>0 & MND=0		
NO SORT		1,081 AD=0 & MD=0 8	& MND>0	
SOME SORT		779 AD>0&0⊲4D⊲4NI		x
UNEXPLAINED RECO	RDS	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>			UNEXPLAIN	PAUSE
AD=0			TIME	TIME
AD<0			09:02:32	06:08
ACT_P <5 kBq	382 33.6%		10:26:52	11:48
vor. a und	<b></b>		•	

and count protons					1	8,610				11	1:48:32	11:56
2-SEC COUNT PERIODS  2-SEC RECORDS WITH SORTS							CACT P	>0 kBq)		11	1:56:11	
			(,,,,,_,	•		13	3:43:51					
	2-9	SEC RECORDS		ECION	85.4%							
			DETECTOR		234		12.0%					
			DETECTOR		33		1.8%					
		4	DETECTOR	RS	5							
		5	DETECTOR	RS	2		0.7%					
			DETECTOR		0		0.0%					
			DETECTOR		0		0.0%					
	8 DETECTORS						0.0%					
			OTAL			274						
		T 2-SEC RE				863						
		17,747										
	AV	G TIME BET	WEEN 2-SE	EC SORTS		43.1	sec					
				MMOCO	SPEC_A			ACT_P	SORT	FREQ%	ACT_P	
1-GATE		567	ACT_ND		(Bq/kg)			(Bq)	(#)		(kBq)	
DETECTR	SORTS	FREQ%	(Bq)	(#)	(ed) (e)			<b>1</b> -4,	•			
	•	1 /4	-14000	1	-250			4000	185	16.3%	4	
1	8	10.8%	-12000	0	-215			8000	492	43.3%	8	
2	61			0	-179			12000	136	12.0%	12	
3	93	16.4%	-8000	2	-143			16000	72	6.3%	16	
4	107	18.9%	-6000	3	-107			20000	57	5.0%	20	
5	120	21.2%	-4000	11	-72			24000	49	4.3%	24	
6	86	15.2%	-2000	54	-36			28000	31	2.7%	28	
7	71	12.5%	-2000	154	0			32000	23	2.0%	32	
8	21	3.7%	2000	315	36			36000	17	1.5%	36	
TOTAL	567		4000	427	72			40000	4	0.4%	40	
		570	6000	432				44000	5	0.4%	44	
2-GATE		570	8000	270				48000	5	0.4%	48	
DETECT	SORTS	FREQ%	10000	128				52000	4	0.4%	52	
8	~~	5 4 <b>9</b>	12000	52				56000	2	0.2%	56	
9	32	5.6%	14000	19				60000	5	0.4%	60	
10	76	13.3%	16000	2				64000	10	0.9%	64	
11	110	19.3%	18000	1				68000	3	0.3%	68	
12	91	16.0%						72000	1	0.1%	72	
13	108	18.9%	20000	0				76000	2	0.2%	76	
14	93	16.3%	22000	0				80000	2	0.2%	80	
15	60	10.5%		0				84000	1	0.1%	84	
TOTAL	570		26000		_			>84000	31	2.7%	>84	
			>28000	4071	_			TOTAL	1137			
			TOTAL	1871								
SUMMARY TOTALS					SORTS B	YONE	GATE O	ILY	567	7		
HOT PARTICLE EVENTS 1160					SORTS B			•	570	)		
MULTIPARTICLE EVENTS					30K13 B							
	DISTRIBUTE	D EVENTS	83									

#### REC CODE EXPLANATION

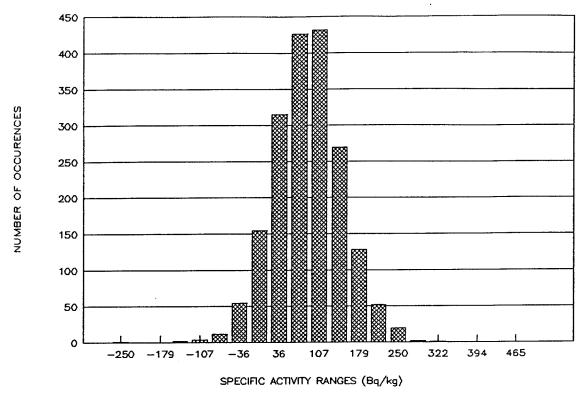
1.00 Source check (Soil on belt)

2.00 Empty belt

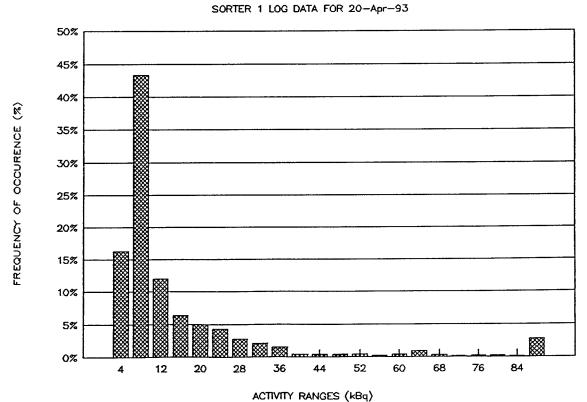
3.00 Test (No process soil)

11:48:32 11:56

SORTER 1 LOG DATA FOR 20-Apr-93



# JA SOIL CLEANUP PLANT HOT PARTICLES



A-139

SORTER 2 20-Apr-93				
AVERAGE BACKGROUND COUNT RATE	0.80 ± 0.0	02 c/sec		
SORTER SOIL DENSITY	1.2 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³		0.544	
		CONTAMINATED	CLEAN	
MASS TOTAL		1.52 tons	103.5 tons	
MAXIMUM/SORT		58.7 kg	55.9 kg	
MINIMUM/SORT		0.7 kg	46.8 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY				98.6%
EQUIVALENT SOIL-IN-GROUND		1.21 yd³	82.0 yd3	83.2 yd3/day
EQUIVALENT SUIT-IN-GROOMS				
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	E)			
TOTAL		19,729 kBq		
MAXIMUM/SORT	·	1,467 kBq	•	
MINIMUM/SORT		2.7 kBq		
DISPERSED + PARTICLE (REALISTIC ES	TIMATEL ACTIVITY	9,523 kBq	4,687 kBq	
	MINITED NOTET IN	1220 kBq	16 kBq	
MAXIMUM/SORT HINIMUM/SORT		-19 Bq	-9 kBq	
SPECIFIC ACTIVITY		6,264 Bq/kg	45 Bq/ks	1
WORK HISTORY				
WORK DAY START	06:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	06:00 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:35 AM	END SOIL PROCESSING		
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr	
WORK HOURS		11.5 hr		
AVAILABLE HOURS		11.5 hr		
ACTUAL DOCCESS HOL	JRS (total 20-sec records)	10.43 hr		
DOWN-TIME	(60001 21 210 1	1.07 hr		•
TOTAL SYSTEM PAUSI	<u> </u>	0.44 hr	,	
NONAVAILABLE HOURS		0.0 hr	•	
START-UP		0.59 hr		
SHUT-DOWN		0.49 hr		
PLANT PERFORMANCE		90.7%		
PRODUCTIVITY		90.7%		
TOTAL SOIL PROCESSING RECORDS (2-	SEC and 20-SEC)	2,897		
NONPROCESS RECORDS (Test, calibra	tion, etc)	17		
20-SEC PROCESS RECORDS		1,878		
TOTAL SORT		1 MD>0 & MND=0		
NO SORT		855 AD=0 & MD=0		
SOME SORT		1,021 AD>0&0 <hd<hn< td=""><td>DMAX&amp;MND<mnumax< td=""><td></td></mnumax<></td></hd<hn<>	DMAX&MND <mnumax< td=""><td></td></mnumax<>	
UNEXPLAINED RECOR	DS	1		DALICE
0 <ad<1kbq &="" md="">0</ad<1kbq>	1		UNEXPLAIN	PAUSE
&D=0 &	MD 0		TIME	TIME 06:08
AD<0 &	MD 1		10:03:52	00:00
ACT_P <5 kBq	300 29.4%		12:01:16	

Printed on 04/27/93 at 05:45:14 PM

A-140

2	-SEC COU	NT PERIODS				18,780					
_		2-SEC RECORD	S WITH S	ORTS		-	(ACT P	>0 kBq)			
		2-SEC RECORD					_	•-			
			DETECTO		229		87.4%				
			DETECTO		29		11.1%				
			DETECTO		3		1.1%				
			DETECTO		1		0.4%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
		8	DETECTO	RS	0		0.0%				
		T	OTAL			262					
		NET 2-SEC RE		TH SORTS		757					
		2-SEC PERIOD				18,023					
		AVG TIME BET				49.6	sec				
	•	N. 11112 021									
1-GATE S	ORTS	542	ACT ND	NUMBER	SPEC_A		,	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	_ (Bq)		(Bq/kg)			(Bq)	(#)		(kBq)
1	13	2.4%	-14000	6	-250			4000	135	13.2%	4
2	66	12.2%	-12000	2	-215			8000	433	42.5%	8
3	113	20.8%	-10000	1	-179		•	12000	156	15.3%	12
4	109	20.1%	-8000	6	-143		•	16000	81	7.9%	16
5	104	19.2%	-6000	6	-107			20000	35	3.4%	20
6	86	15.9%	-4000	29	-72		- 2	24000	29	2.8%	24
7	39	7.2%	-2000	129	-36			28000	18	1.8%	28
8	12	2.2%	0	293	0		3	<b>52000</b>	14	1.4%	32
TOTAL	542		2000	393	36		3	56000	16	1.6%	36
			4000	441	72		4	0000	8	0.8%	40
2-GATE S	ORTS	477	6000	302	107		4	44000	11	1.1%	44
DETECTR	SORTS	FREQ%	8000	171	143		4	8000	3	0.3%	48
8			10000	73	179		:	52000	6	0.6%	52
9	31	6.5%	12000	28	215		:	6000	3	0.3%	56
10	69	14.5%	14000	5	250		•	50000	6	0.6%	60
11	104	21.8%	16000	7	286		•	54000	5	0.5%	64
12	101	21.2%	18000	3	322		•	58000	7	0.7%	68
13	83	17.4%	20000	0	358		;	72000	3	0.3%	72
14	68	14.3%	22000	0	394		7	76000	7	0.7%	76
15	21	4.4%	24000	0	429		1	30000	4	0.4%	80
TOTAL	477		26000	0	465		ŧ	34000	0	0.0%	84
			>28000	0	0		>8	34000	39	3.8%	>84
			TOTAL	1895			1	TOTAL	1019		
SUMMARY	TOTALS										
H	OT PARTIC	CLE EVENTS	1007		SORTS BY	ONE GA	TE ONL'	1	542		
M	ULTIPART	ICLE EVENTS	1081		SORTS BY	TWO GA	TES		477		
D	ISTRIBUT	ED EVENTS	83								

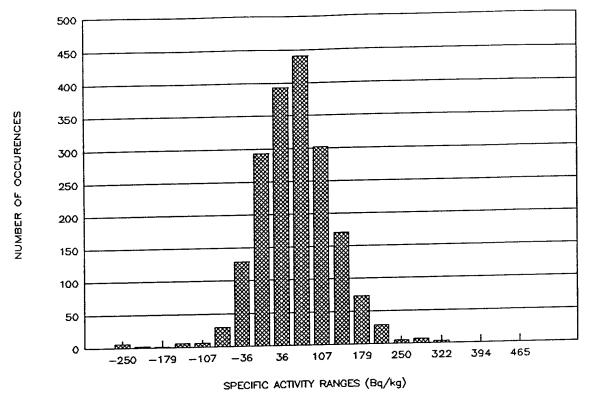
#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

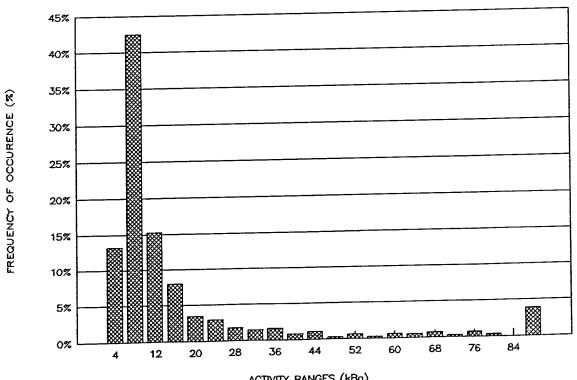
2.00 Empty belt

3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 20-Apr-93



JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 20-Apr-93



ACTIVITY RANGES (kBq)

A-142

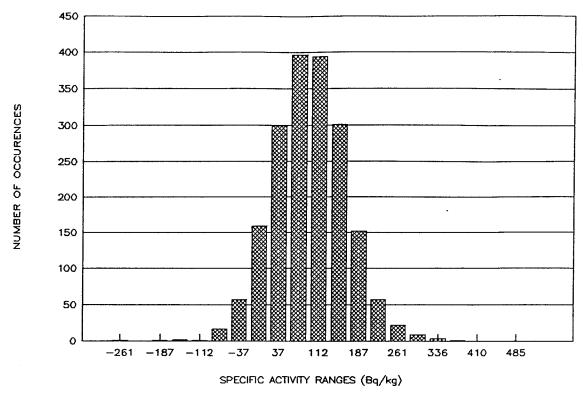
SORTER 1 19-Apr-93					
AVERAGE BACKGROUND COUNT RATE		0.78 ± 0.	.04 c/sec		
SORTER SOIL DENSITY		1.15 tons/m <sup>3</sup>			
GROUND SOIL DENSITY		1.65 tons/m <sup>3</sup>			
			CONTAMINATED	CLEAN	
MASS TOTAL			1.47 tons	98.7 ton:	S
MAXIMUM/SORT			7.4 kg	53.6 kg	
MINIMUM/SORT			0.7 kg	46.2 kg	
A STATE OF THE STA					98.5%
WEIGHT RECOVERY OR VOLUME RECOVERY			1.17 yd³	78.2 yd³	79.4 yd³/day
EQUIVALENT SOIL-IN-GROUND			11.11 <b>/</b> G	/2	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	E)				
TOTAL	-,		30,900 kBq		
MAXIMUM/SORT			1,590 kBq		
MINIMUM/SORT			2.4 kBq		
,,,					
DISPERSED + PARTICLE (REALISTIC ES	TIMATE) ACTIV	'ITY	12,455 kBq	7,636 kBq	
MAXIMUM/SORT			1185 kBq	18 kBq	
MINIMUM/SORT			0 Bq	-7 kBq	
SPECIFIC ACTIVITY			8,468 Bq/kg	77 Bq/	kg
WORK HISTORY	04 00 44		LOOK DAY END	05:30 PM	
WORK DAY START	06:09 AM		WORK DAY END PLANT SHUT-DOWN	05:30 PM	
PLANT START-UP	06:09 AM		END SOIL PROCESSING		
START SOIL PROCESSING LUNCH START	06:35 AM 11:30 AM		LUNCH PERIOD	0.0 hr	
LUNCH START	11:30 AM		LONCH PERIOD	0.0	
WORK HOURS			11.4 hr		
AVAILABLE HOURS			11.4 hr		
ACTUAL PROCESS HOU	RS (total 20-	sec records)	10.38 hr		
DOWN-TIME			0.97 hr		
TOTAL SYSTEM PAUSE			0.43 hr		
NONAVAILABLE HOURS			0.0 hr		
START-UP			0.44 hr		
SHUT-DOWN			0.53 hr		
PLANT PERFORMANCE			91.5%		
PRODUCTIVITY			91.5%		
TOTAL SOIL PROCESSING RECORDS (2-S	EC and 20-SEC	<b>;</b> )	3,454		
NONPROCESS RECORDS (Test, calibrat			4		
20-SEC PROCESS RECORDS	-		1,869		
TOTAL SORT			0 MD>0 & MND=0		
NO SORT			943 AD=0 & MD=0	& MND>0	
SOME SORT			926 AD>0&0 <md<mn< td=""><td>Dmax&amp;MND<mndma:< td=""><td>ĸ</td></mndma:<></td></md<mn<>	Dmax&MND <mndma:< td=""><td>ĸ</td></mndma:<>	ĸ
UNEXPLAINED RECORD	s		0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	3			UNEXPLAIN	PAUSE
AD=0 &	MD 0			TIME	TIME
AD<0 &	MD 0			07:48:36	06:09
ACT_P <5 kBq	473	29.8%		12:31:56	06:10

•	-SEC COUNT	0001000				18,690				12	:49:56
2		SEC RECORDS	OZ HTIU	RTS			(ACT_P	>0 kBq)			
	2.	SEC RECORDS	TH DO	CITIVES	IN >1 DE	-	_				
	2-		DETECTOR		365		83.9%				
			DETECTOR		57		13.1%				
		_			11		2.5%				
			DETECTOR		2		0.5%				
		_	DETECTOR		0		0.0%				
		_	DETECTOR		0		0.0%				
		•	DETECTOR		0		0.0%				
			DETECTOR	.5	U	435					
			OTAL			1,150					
		ET 2-SEC REC				17,540					
		-SEC PERIODS				32.5					
	A'	VG TIME BET	ÆEN 2-SE	C SUKIS		36.3	300				
1-GATE	SORTS	794	ACT_ND	NUMBER	SPEC_A			ACT_P		FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(pg)	(#)		(kBq)
DETECTION	••••								224	13.9%	4
1	18	2.3%	-14000	1	-261			4000	221		8
2	81	10.2%	-12000	0	-224			8000	664	41.9%	
3	128	16.1%	-10000	1	- 187			12000	222	14.0%	12
4	142	17.9%	-8000	2	-149	*		16000	132	8.3%	16
5	166	20.9%	-6000	1	-112			20000	79	5.0%	20
6	125	15.7%	-4000	17	-75			24000	52	3.3%	24
7	101	12.7%	-2000	57	-37			28000	30	1.9%	28
8	33	4.2%	0	159	0			32000	32	2.0%	32
TOTAL	794		2000	299	37			36000	29	1.8%	36
TOTAL			4000	397	75			40000	16	1.0%	40
2-GATE	SORTS	791	6000	394	112			44000	12		44
DETECTR		FREQ%	8000	301	149			48000	10		48
8	•		10000	152	187			52000	5	0.3%	52
9	49	6.2%	12000	57	224			56000	8		56
10	115	14.5%	14000	22	261			60000	3		60
11	137	17.3%	16000	9	299			64000	8		64
12	137	17.3%	18000	3	336			68000	6		68
13	168	21.2%	20000	1	373			72000	3		72
14	113	14.3%	22000	0	410			76000	3		76
15	72	9.1%	24000	0	448			80000	2		80
TOTAL	791		26000	0	485			84000	3		84
IOIAL			>28000	0	0			>84000	45		>84
			TOTAL	1873	;			TOTAL	1585		
SUMMARY	TOTALS								<b>30.</b> (		
		CLE EVENTS	1590		SORTS B			LY	794 701		
		ICLE EVENTS	612		SORTS B	Y TWO	GATES		791		
	DISTRIBUT		0								

### REC CODE EXPLANATION

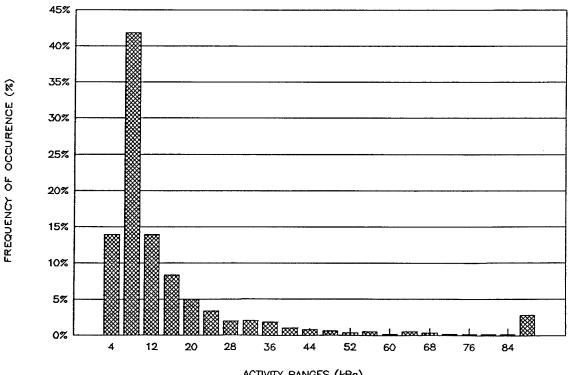
- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 1 LOG DATA FOR 19-Apr-93



## JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 19-Apr-93



ACTIVITY RANGES (kBq)

A-145

SORTER 2 19-A	pr-93								
AVERAGE BACKGROUND CO	UNT RATE	0.80	±	0.03	c/sec				
SORTER SOIL DENSITY		1.15	tons/m	5					
GROUND SOIL DENSITY		1.65	tons/m	5			CI CAN		
<del></del>						INATED	CLEAN	tons	
MASS TOTAL					-	tons	53.6		
MAXIMUM/SORT					53.6		44.9		•
MINIMUM/SORT					0.7	' kg	44.7	ĸy	
_									97.5%
WEIGHT RECOVERY OR VO					1.95	i yd³	77.4	yd3	79.3 yd3/day
EQUIVALENT SOIL-IN-GR	OUND				,	•			
PARTICLE ACTIVITY (MA	XIMUM ESTIMATE)								
TOTAL					21,595	i kBq			
MAXIMUM/SORT						kBq			
MINIMUM/SORT					2.2	2 kBq			
					11,691	l kRa	5,269	kBa	
DISPERSED + PARTICLE	(REALISTIC ESTIMATE) ACTI	VITY				i kbq 3 kBq		kBq	
MAXIMUM/SORT						) Bq		kBq	
MINIMUM/SORT						, by 3 Bq/kg		Bq/kg	
SPECIFIC ACTIV	/ITY				4,130	5 04 K3		• -	
WORK HISTORY									
WORK DAY START	05:50 AM					DAY END	05:30 PM		
PLANT START-UP						SHUT-DOWN	05:30 PM		
START SOIL PRO						OIL PROCESSING		hr hr	
LUNCH START	11:30 AM				LUNCH	PERIOD	0.0	nt.	
1904	HOUDE					11.7 hr			
	HOURS _ABLE HOURS					11.7 hr			
	AL PROCESS HOURS (total 20	)-sec r	ecords)	)		10.38 hr			
	-TIME					1.29 hr			
	SYSTEM PAUSE					0.43 hr			•
	VAILABLE HOURS					0.0 hr			
STAR						0.76 hr			
	-DOWN					0.53 hr			
	T PERFORMANCE					89.0%			
	UCTIVITY					89.0%			
	G RECORDS (2-SEC and 20-SE	-C)				3,346			
TOTAL SOIL PROCESSIN	G RECURDS (2°3EC and 20 Si	-0,				5			
	Test, calibration, etc)				1,86	8			
20-SEC PROCES	L SORT					5 MD>0 & MND=0			
NO S						1 AD=0 & MD=0			
	SORT				1,32	2 AD>0&0 <md<mn< td=""><td>Dmax&amp;MND⊲</td><td>MNDmax</td><td></td></md<mn<>	Dmax&MND⊲	MNDmax	
	PLAINED RECORDS					0			
	<1kBq & MD>0 0						UNEXPLA	IN	PAUSE
0.40	AD=0 & MD 0						TIME		TIME
	AD<0 & MD 0						None		06:09
ACT_	P <5 kBq 463	31.3	3%						06:10
_									

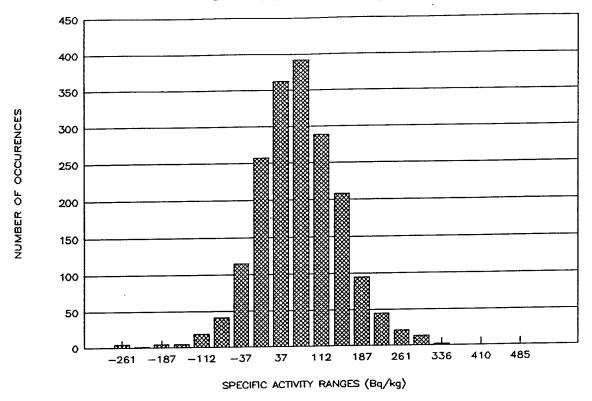
2-SEC COUNT PERIODS	18,6	30
2-SEC RECORDS WITH SORTS	1,47	78 (ACT_P >0 kBq)
2-SEC RECORDS WITH POSITIVES	IN >1 DETECTO	OR .
2 DETECTORS	317	85.4%
3 DETECTORS	48	12.9%
4 DETECTORS	6	1.6%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL	37	<b>'</b> 1
NET 2-SEC RECORDS WITH SORTS	1,10	7
2-SEC PERIODS WITH NO SORTS	17,57	3
AVG TIME BETWEEN 2-SEC SORTS	33.	7 sec

1-GATE	SORTS	782	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECT	TR SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	l 21	2.7%	-14000	4	-261	4000	209	14.1%	4
2	2 83	10.6%	-12000	1	-224	8000	641	43.4%	8
3	164	21.0%	-10000	4	-187	12000	218	14.7%	12
4	168	21.5%	-8000	4	-149	16000	129	8.7%	16
5	164	21.0%	-6000	18	-112	20000	71	4.8%	20
6	112	14.3%	-4000	41	-75	24000	42	2.8%	24
7	<b>7</b> 62	7.9%	-2000	115	-37	28000	18	1.2%	28
8	8	1.0%	0	257	0	32000	27	1.8%	32
TOTAL	. 782		2000	363	37	36000	22	1.5%	36
			4000	393	75	40000	11	0.7%	40
2-GATE	SORTS	696	6000	289	112	44000	16	1.1%	44
DETECT	R SORTS	FREQ%	8000	208	149	48000	9	0.6%	48
8	3		10000	95	187	52000	4	0.3%	52
9	35	5.0%	12000	45	224	56000	5	0.3%	56
10	91	13.1%	14000	21	261	60000	6	0.4%	60
11	171	24.6%	16000	13	299	64000	7	0.5%	64
12	156	22.4%	18000	2	336	68000	4	0.3%	68
13	122	17.5%	20000	0	373	72000	1	0.1%	72
14	90	12.9%	22000	0	410	76000	3	0.2%	76
15	31	4.5%	24000	0	448	80000	2	0.1%	80
TOTAL	696		26000	0	485	84000	2	0.1%	84
			>28000	0	0	>84000	31	2.1%	>84
			TOTAL	1873		TOTAL	1478		
SUMMAR	Y TOTALS								
	HOT PARTI	CLE EVENTS	1465		SORTS BY	ONE GATE ONLY	782		
	MULTIPART	ICLE EVENTS	1821		SORTS BY	TWO GATES	696		
		ED EVENTS	389						

#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 19-Apr-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 19-Apr-93

50% 45% 40% FREQUENCY OF OCCURENCE (%) 35% 30% 25% 20% 15% 10% 5% 0% 76 28 36 68 20 12 ACTIVITY RANGES (kBq)

A-148

SORTER 1	17-Apr-93								
AVERAGE BACKGF	ROUND COUNT RATE		0.74	ŧ	0.05 c/sec				
SORTER SOIL DE	ENSITY		1.15 t	ons/m³					
GROUND SOIL DE	ENSITY		1.65 t	ons/m³					
					CONTAMI	NATED	CLEAN		
MASS TOTAL					1.61			tons	
MAXIMU	M/SORT				53.6		53.6	-	
MINIMUM	M/SORT				0.7	kg	40.8	kg	
WEIGHT RECOVER	RY OR VOLUME RECOVERY								97.9%
EQUIVALENT SO					1.28	yd³	58.6	Aq2	59.8 yd3/day
PARTICLE ACTIV	VITY (MAXIMUM ESTIMATE								
TOTAL		•			16,566	kBq			
MAXIMUN	1/SORT				443	•			
MINIMUN					2.4	kBq			
DISPERSED + DI	ARTICLE (REALISTIC EST	IMATE) ACTIV	'ITY		7,998	kBq	6,274	kBq	
MAXIMUN			•••		348	•	-	kBq	
MINIMUM					. 0 (	•	-13	kBq	•
	IC ACTIVITY				4,957	Bq/kg	85	Bq/kg	
WORK HISTORY									
	AY START	06:00 AM			WORK DA	Y END	05:30 PM		
	START-UP	06:00 AM			PLANT S	HUT-DOWN	05:30 PM		
	SOIL PROCESSING	07:00 AM			END SOI	L PROCESSING	03:08 PM		
LUNCH S	START	11:30 AM			LUNCH P	ERIOO	0.0	hr	
,	WORK HOURS					11.5 hr			
	AVAILABLE HOURS					11.5 hr			
	ACTUAL PROCESS HOUR	S (total 20-	sec rec	ords)		7.83 hr	•		
	DOWN-TIME					3.67 hr			
	TOTAL SYSTEM PAUSE					1.23 hr			
	NONAVAILABLE HOURS					0.0 hr			
	START-UP					1.01 hr			
	SHUT-DOWN					2.35 hr			
	PLANT - PERFORMANCE					68.1%			
	PRODUCTIVITY					68.1%			
TOTAL SOIL PRO	OCESSING RECORDS (2-SE	C and 20-SEC	:)		-	2,801			
NONPROCESS REC	CORDS (Test, calibrati	on, etc)			•	. 19			
20-SEC	PROCESS RECORDS				1,409				
	TOTAL SORT				2 1	MD>0 & MND=0			
	NO SORT				691	AD=0 & MD=0 &	MND>0		
•	SOME SORT					AD>0&0 <md<< td=""><td>)max&amp;MND<mi< td=""><td>NDmax</td><td></td></mi<></td></md<<>	)max&MND <mi< td=""><td>NDmax</td><td></td></mi<>	NDmax	
	UNEXPLAINED RECORDS				0	•			
	0 <ad<1kbq &="" md="">0</ad<1kbq>	1					UNEXPLAII	N E	PAUSE
• .	AD=0 & M						TIME		TIME
	M & 0>DA	D 0					13:50:35		06:00
	ACT_P <5 kBq	584	42.0%				(3130133		07:04

2-SEC COUNT PERIODS	14,09	
2-SEC RECORDS WITH SORTS	1,39	2 (ACT_P >0 kBq)
2-SEC RECORDS WITH POSITIVES	IN >1 DETECTO	R
2 DETECTORS	305	90.2%
3 DETECTORS	31	9.2%
4 DETECTORS	2	0.6%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL	33	8
NET 2-SEC RECORDS WITH SORTS	1,05	4
2-SEC PERIODS WITH NO SORTS	13,03	6 .
AVG TIME BETWEEN 2-SEC SORTS	26.	7 sec

1-GATE S	ORTS	692	ACT ND	NUMBER	SPEC_A	ACT_P		FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)		(Bq/kg)	(pq)	(#)		(kBq)
DETECTA	JOKIO	• • • • • • • • • • • • • • • • • • • •							
1	11	1.6%	-14000	5	-261	4000	282	20.3%	4
2	61	8.8%	-12000	6	-224	8000	689	49.5%	8
3	109	15.8%	-10000	5	-187	12000	169	12.1%	12
4	121	17.5%	-8000	4	-149	16000	69	5.0%	16
5	139	20.1%	-6000	4	-112	20000	39	2.8%	20
6	110	15.9%	-4000	14	-75	24000	35	2.5%	24
7	113	16.3%	-2000	46	-37	28000	17	1.2%	28
8	28	4.0%	0	162	0	32000	13	0.9%	32
TOTAL	692	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	2000	230	37	36000	11	0.8%	36
IOIAL	0,2		4000	262	75	40000	7	0.5%	40
2-GATE S	PTC	700	6000	229	112	44000	2	0.1%	44
DETECTR	SORTS	FREQ%	8000	164	149	48000	6	0.4%	48
8	301110		10000	120	187	52000	5	0.4%	52
9	31	4.4%	12000	72		56000	6	0.4%	56
10	79	11.3%	14000	45	261	60000	2	0.1%	60
11	118	16.9%	16000	34	299	64000	5	0.4%	64
12	133	19.0%	18000	15	336	68000	7	0.5%	68
13	132	18.9%	20000	8	373	72000	6	0.4%	72
14	120	17.1%	22000	3	410	76000	3	0.2%	76
15	87	12.4%	24000	0	448	80000	2	0.1%	80
TOTAL	700	124111	26000	0	485	84000	0	0.0%	84
IOIAL	100	•	>28000	0	0	>84000	17	1.2%	>84
			TOTAL	1428	}	TOTAL	1392		
SUMMARY	TOTALS								
	OT PARTICE	E EVENTS	1487		SORTS BY	ONE GATE ONLY	692		
	OLTIPARTIC		776			TWO GATES	700	ı	
	) ISTRIBUTE		152						
,	,191KIDUICI	, LILATO							

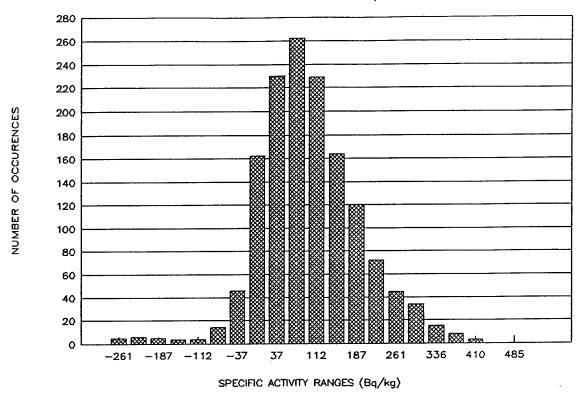
#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

2.00 Empty belt

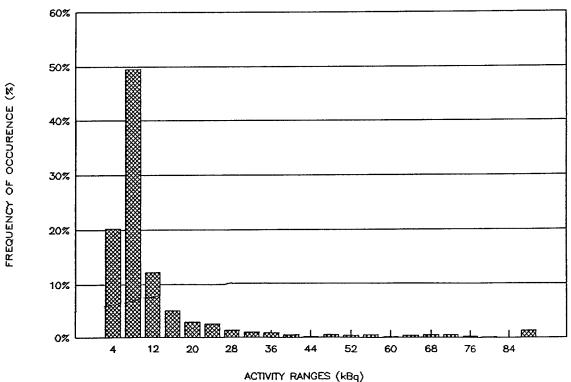
3.00 Test (No process soil)

SORTER 1 LOG DATA FOR 17-Apr-93



# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 17-Apr-93



A-151

SORTER 2 17-Apr-93							
AVERAGE BACKGROUND COUNT RATE		0.79	± 0	.04 c/sec			
SORTER SOIL DENSITY		1.15	tons/m³				
GROUND SOIL DENSITY		1.65	tons/m³				
GROOMD SOLE DEMOLIT				CONTAMINATED	CLEAN		
MASS TOTAL				3.14 tons	71.3		
MAXIMUM/SORT				53.6 kg	53.6	kg	
MINIMUM/SORT				0.7 kg	42.8	kg	
HIRITION CONT.							
WEIGHT RECOVERY OR VOLUME RECOVERY							95.8%
EQUIVALENT SOIL-IN-GROUND				2.49 yd³	56.5	Aq <sub>3</sub>	59.0 yd3/day
EAGLANEELL AGES IN CHASH							
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	)						
TOTAL				20,775 kBq			
MAXIMUM/SORT				1,488 kBq			
MINIMUM/SORT				2.3 kBq			
Fill I I I I I I I I I I I I I I I I I I							
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTIV	'ITY		12,371 kBq	6,805	-	
MAXIMUM/SORT				1316 kBq		kBq	
MINIMUM/SORT				0 Bq	-17		
SPECIFIC ACTIVITY				3,935 Bq/kg	95	Bq/kg	
of Lott to Motors							
WORK HISTORY					as 30 au		
WORK DAY START	06:00 AM			WORK DAY END	05:30 PM		
PLANT START-UP	MA 00:60			PLANT SHUT-DOWN	05:30 PM		
START SOIL PROCESSING	07:00 AM			END SOIL PROCESSING	03:07 PM 0.0	h-n	
LUNCH START	11:30 AM			LUNCH PERIOD	0.0	"	
				11.5 hr			
WORK HOURS				11.5 hr			
AVAILABLE HOURS				7.72 hr			
ACTUAL PROCESS HOUR	S (total 20-	-sec r	ecords)	3.78 hr			
DOWN-TIME				1.23 hr			
TOTAL SYSTEM PAUSE				0.0 hr			
NONAVAILABLE HOURS				1.00 hr			
START-UP				2.38 hr			
SHUT-DOWN				67.1%			
PLANT PERFORMANCE				67.1%			
PRODUCTIVITY				01.14			
		••		2,762			
TOTAL SOIL PROCESSING RECORDS (2-SE	C and 20-SE	<b>(;)</b>		35			
NONPROCESS RECORDS (Test, calibrati	ion, etc)			1,390			
20-SEC PROCESS RECORDS				19 MD>0 & MND=0			
TOTAL SORT				403 AD=0 & MD=0			
NO SORT				967 AD>0&0 <md<mn< td=""><td></td><td>NDmax</td><td></td></md<mn<>		NDmax	
SOME SORT	•			1			
UNEXPLAINED RECORDS				•	UNEXPLAT	N	PAUSE
0 <ad<1kbq &="" md="">0</ad<1kbq>	1 4D 1				TIME		TIME
AD=0 & N	_				08:11:55		06:00
AD<0 & 1	520	37.9	<b>1</b> %		11:10:55		07:04
ACT_P <5 kBq	320	21.7	~				

Printed on 05/22/93 at 10:57:06 AM

1,372 (ACT\_P >0 kBq)

13,900

		Z-SEC RECORE	22 MIIIU L	02111452	14 >! D	CIECIOR				
		7	2 DETECTO	RS	268	83.2%				
		3	DETECTO	RS	48	14.9%				
		4	DETECTO	RS	6	1.9%				
		. 5	DETECTO	RS	0	0.0%				
		6	DETECTO	RS	0	0.0%				
		7	DETECTO	RS	0	0.0%				
		8	DETECTO	RS	0	0.0%				
		1	TOTAL			322				
		NET 2-SEC RE	CORDS WI	TH SORTS		1,050				
		2-SEC PERIOD	S WITH N	O SORTS		12,850				
		AVG TIME BET	WEEN 2-S	EC SORTS		26.5 sec				
1-GATE	STRUS	720	ACT_ND	NUMBER	SPEC_A		ACT P	SORT	FREQ%	ACT_P
DETECTR			(Bq)		(Bq/kg)		(Bq)	(#)		(kBq)
DETECT	JORIS	INCAN	(bq)	(")	(Dd) kg)		(bq)	(")		(204)
. 1	17	2.4%	-14000	13	-261		4000	262	19.1%	4
2	108	15.0%	-12000	6	-224		8000	657	47.9%	8
3	99	13.8%	-10000	4	-187		12000	160	11.7%	12
4	120	16.7%	-8000	4	-149		16000	84	6.1%	16
5	144	20.0%	-6000	5	-112		20000	41	3.0%	20
6	120	16.7%	-4000	11	-75		24000	25	1.8%	24
7	94	13.1%	-2000	36	-37		28000	20	1.5%	28
8	18	2.5%	0	119	0		32000	21	1.5%	32
TOTAL	720		2000	213	37		36000	13	0.9%	36
			4000	248	75		40000	13	0.9%	40
2-GATE	SORTS	652	6000	252	112		44000	10	0.7%	44
DETECTR	SORTS	FREQ%	8000	177	149		48000	4	0.3%	48
8			10000	152	187		52000	5	0.4%	52
9	49	7.5%	12000	95	224		56000	8	0.6%	56
10	88	13.5%	14000	49	261		60000	3	0.2%	60
11	109	16.7%	16000	30	299		64000	3	0.2%	64
12	128	19.6%	18000	11	336		68000	6	0.4%	68
13	121	18.6%	20000	0	373		72000	1	0.1%	72
14	113	17.3%	22000	. 0	410		76000	4	0.3%	76
15	44	6.7%	24000	0	448		80000	2	0.1%	80
TOTAL	652	•	26000	0	485		84000	. 2	0.1%	84
			>28000	0	0	>	84000	28	2.0%	>84
			TOTAL	1425			TOTAL	1372		
SUMMARY	TOTALS									
	HOT PARTI	CLE EVENTS	1441		SORTS BY	ONE GATE ONL	Y	720		
1	MULTIPART	ICLE EVENTS	1856		SORTS BY	TWO GATES	•	652		

#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

1402

2.00 Empty belt

DISTRIBUTED EVENTS

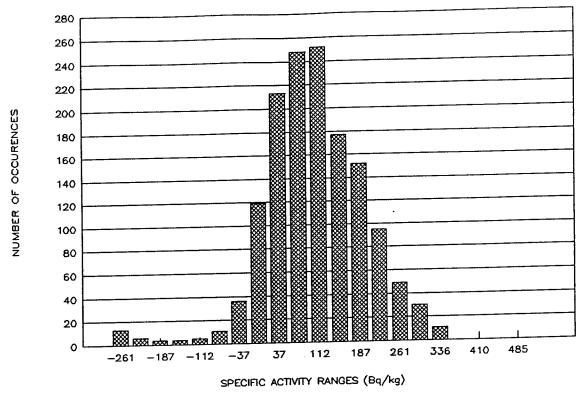
2-SEC COUNT PERIODS

2-SEC RECORDS WITH SORTS

2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR

3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 17-Apr-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 17-Apr-93

50% 40% FREQUENCY OF OCCURENCE (%) 30% 20% 10% 0% 68 76 84 60 52 28 36 12 20 4 ACTIVITY RANGES (kBq)

A-154

SORTER 1 16-Apr-93				
AVERAGE BACKGROUND COUNT RATE	0.75 ±	0.04 c/sec		
SORTER SOIL DENSITY	1.15 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m <sup>3</sup>	ı		
		CONTAMINATED	CLEAN	
MASS TOTAL		0.30 tons	66.8 ton	s
MAXIMUM/SORT		4 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	49.5 kg	
ATTACK DESCRIPTION OF MOUNTS DESCRIPTION				00.48
WEIGHT RECOVERY OR VOLUME RECOVERY		0.24 yd³	52.9 yd³	99.6% 53.2 yd³/day
EQUIVALENT SOIL-IN-GROUND		0.24 yd	32.9 yu	33.2 yu /day
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	·E)			
TOTAL		3,975 kBq		
MAXIMUM/SORT	•	227 kBq		
MINIMUM/SORT		2.5 kBq		
DISPERSED + PARTICLE (REALISTIC ES	TIMATE) ACTIVITY	1,755 kBq	531 kBq	
MAXIMUM/SORT	THATE, ACTIVITY	188 kBq	11 kBq	
MINIMUM/SORT		0 Bq	-11 kBq	
SPECIFIC ACTIVITY		5,812 Bq/kg	8 Bq/	
GI EGITIO AGTIVITI		270.12 54 Kg		<b>.</b>
WORK HISTORY				
WORK DAY START	06:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	10:01 AM	PLANT SHUT-DOWN	05:01 PM	
START SOIL PROCESSING	10:02 AM	END SOIL PROCESSING	04:59 PM	
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr	
WORK HOURS		11.5 hr		
AVAILABLE HOURS		7.0 hr		
	RS (total 20-sec records)	6.96 hr		
DOWN-TIME		0.04 hr		
TOTAL SYSTEM PAUSE		0.60 hr		
NONAVAILABLE HOURS		4.5 hr		
START-UP		0.02 hr		
SHUT-DOWN		0.03 hr		
PLANT PERFORMANCE		99.4%		
PRODUCTIVITY		60.5%		
TOTAL SOIL PROCESSING RECORDS (2-S	FC and 20-SFC)	1,553		
NONPROCESS RECORDS (Test, calibrat		7		
20-SEC PROCESS RECORDS	,,	1,252		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		992 AD=0 & MD=0 8	MND>0	
SOME SORT		260 AD>0&0 <md<mnc< td=""><td></td><td><b>(</b></td></md<mnc<>		<b>(</b>
UNEXPLAINED RECORD	s	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		UNEXPLAIN	PAUSE
AD=0 & !	MD 0		TIME	TIME
AD<0 &	MD 0		None	09:25
ACT_P <5 kBq	105 34.9%			09:35

A-155

2-SEC COL	INT PERIODS				12,520				
	2-SEC RECORD	S WITH SO	RTS		301	(ACT_P	>0	kBq)	
	2-SEC RECORD	S WITH PO	SITIVES	IN >1 DE	TECTOR				
		DETECTOR		59		76.6%			
	3	DETECTOR	RS	15		19.5%			
	_	DETECTOR		3		3.9%			
	-	DETECTOR		0		0.0%			
	_	DETECTOR		0		0.0%			
	_	DETECTOR		0		0.0%			
	•	DETECTOR		0		0.0%			
	-	OTAL			77				
	NET 2-SEC RE		ru saets		224				
					12,296				
	2-SEC PERIOD								
	AVG TIME BET	WEEN 2-SE	EC SORTS		111.8	sec			
			MI MIDED	SPEC A			ACT	P	S
E SORTS	161	ACT_ND		_			•		-
TR SORTS	FREQX	(Bq)	(#)	(Bq/kg)			(B	<b>4</b> )	,

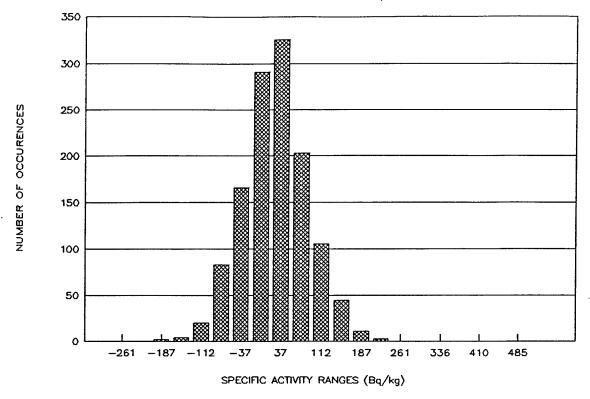
1-GATE S	OPTS	161	ACT ND	NUMBER	SPEC_A		ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(Bq)	(#)		(kBq)
DETECTA	Johns	2	•							
1	1	0.6%	-14000	0	-261		4000	54	17.9%	4
2	5	3.1%	-12000	0	-224		8000	131	43.5%	8
3	20	12.4%	-10000	2	-187		12000	43	14.3%	12
4	39	24.2%	-8000	4	-149		16000	19	6.3%	16
5	44	27.3%	-6000	20	-112		20000	14	4.7%	20
6	25	15.5%	-4000	83	-75		24000	8	2.7%	24
7	23	14.3%	-2000	166	-37		28000	6	2.0%	28
8	4	2.5%	0	291	0		32000	8	2.7%	32
TOTAL	161		2000	326	37		36000	1	0.3%	36
TOTAL			4000	203	75		40000	0	0.0%	40
2-GATE S	ORTS	140	6000	106	112		44000	1	0.3%	44
DETECTR	SORTS	FREQ%	8000	44	149		48000	0	0.0%	48
8			10000	11	187		52000	1	0.3%	52
9	3	2.1%	12000	3	224		56000	2	0.7%	56
10	7	5.0%	14000	0	261		60000	2	0.7%	60
11	23	16.4%	16000	0	299		64000	1	0.3%	64
12	36	25.7%	18000	0	336		68000	1	0.3%	68
13	34	24.3%	20000	0	373		72000	1	0.3%	72
14	25	17.9%	22000	0	410		76000	1	0.3%	76
15	12	8.6%	24000	0	448		80000	1	0.3%	80
TOTAL	140		26000	0	485		84000	0	0.0%	84
1017.0	• • • •		>28000	0	0		>84000	6	2.0%	>84
			TOTAL	1259	)		TOTAL	301		
SUMMARY	TOTALS									
	OT PARTIC	LE EVENTS	299			ONE GATE		161		
		CLE EVENTS	151		SORTS BY	TWO GATES		140		
	ISTRIBUTE		0							

I IUINLO			4/4
HOT PARTICLE EVENTS	299	SORTS BY ONE GATE ONLY	161
MULTIPARTICLE EVENTS	151	SORTS BY TWO GATES	140
DISTRIBUTED EVENTS	0		

### REC CODE EXPLANATION

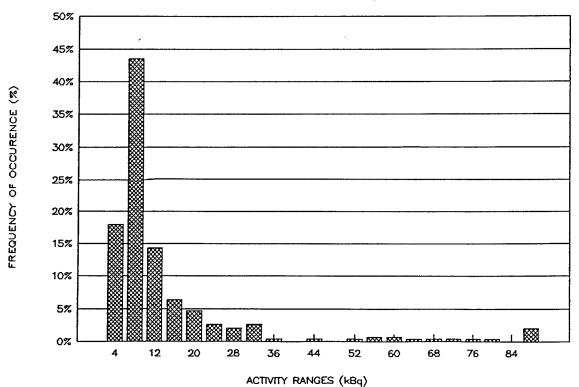
- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 1 LOG DATA FOR 16-Apr-93



# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 16-Apr-93



A-157

SORTER 2 16-Apr	93				
AVERAGE BACKGROUND COUL	IT RATE	0.79 ± 0.0	2 c/sec		
SORTER SOIL DENSITY		1.15 tons/m <sup>3</sup>			
GROUND SOIL DENSITY		1.65 tons/m <sup>3</sup>			
			CONTAMINATED	CLEAN	
MASS TOTAL			0.49 tons	64.4 tons	
MAXIMUM/SORT			6 kg	53.6 kg	
MINIMUM/SORT			0.7 kg	47.5 kg	
					99.2%
WEIGHT RECOVERY OR VOL			0.39 yd³	51.0 yd3	51.4 yd3/day
EQUIVALENT SOIL-IN-GRO	DNL		0.37 yu	31.5 /	2, 2
PARTICLE ACTIVITY (MAX	IMUM ESTIMATE)				
TOTAL			3,634 kBq		
MAXIMUM/SORT			79 kBq		
MINIMUM/SORT			2.7 kBq		
			3 477 Law	804 kBq	
DISPERSED + PARTICLE (	REALISTIC ESTIMATE) ACTIV	/ITY	2,177 kBq	13 kBq	
MAXIMUM/SORT			78 kBq	-10 kBq	
MINIMUM/SORT			0 Bq	12 Bq/kg	1
SPECIFIC ACTIVI	тү		4,446 Bq/kg	12 04/149	
WORK HISTORY					
WORK DAY START	06:00 AM		WORK DAY END	05:30 PM	
PLANT START-UP	10:01 AM		PLANT SHUT-DOWN	05:01 PM	
START SOIL PROC	ESSING 10:02 AM		END SOIL PROCESSING		
LUNCH START	11:30 AM		LUNCH PERIOD	0.0 hr	
	auna		11.5 hr		
WORK H			7.0 hr		
	BLE HOURS PROCESS HOURS (total 20-	-sec records)	6.72 hr		
ACTUAL DOWN-T		300 (000, 00)	0.28 hr		
	SYSTEM PAUSE		0.60 hr		
	ILABLE HOURS		4.5 hr		
			0.02 hr		
START- Shut-d			0.01 hr		
	PERFORMANCE		96.0%		
	TIVITY		58.5%		
	RECORDS (2-SEC and 20-SEC	c)	1,491 49		
NONPROCESS RECORDS (Te					
20-SEC PROCESS			1,210 0 MD>0 & MND=0		
TOTAL			775 AD=0 & MD=0 8	& MND>0	
NO SOF			435 AD>0&0 <md<mni< td=""><td></td><td></td></md<mni<>		
SOME S			0		
	AINED RECORDS		•	UNEXPLAIN	PAUSE
0 <ad<1< td=""><td>and a in-</td><td></td><td></td><td>TIME</td><td>TIME</td></ad<1<>	and a in-			TIME	TIME
				None	09:25
		31.0%			09:35
ACT_P	<5 kBq 87	J.100			

Printed on 04/20/93 at 04:23:23 PM

12,100

	2+3EL LU	ONI PERIODS				12,100					
		2-SEC RECORD	S WITH S	SORTS		281	(ACT_P	>0 kBq)			
		2-SEC RECORD	S WITH F	OSITIVES	IN >1 D	ETECTOR					
		2	DETECTO	)RS	63		85.1%				
		3	DETECTO	<b>RS</b>	11		14.9%				
		4	DETECTO	RS	0		0.0%				
		5	DETECTO	RS	0		0.0%				
		6	DETECTO	RS	0		0.0%				
		7	DETECTO	RS	0		0.0%				
		8	DETECTO	RS	0		0.0%				
		T	OTAL			74					
		NET 2-SEC RE	CORDS WI	TH SORTS		207					
		2-SEC PERIOD	S WITH N	O SORTS		11,893					
		AVG TIME BET	WEEN 2-S	EC SORTS		116.9	sec				
1-GATE	SORTS	148	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT P
DETECT			(Bq)		(Bq/kg)			(Bq)	(#)		(kBq)
			·		•			•			
1	4	2.7%	-14000	1	-261			4000	38	13.5%	4
2	16	10.8%	-12000	0	-224		•	8000	128	45.6%	8
3	25	16.9%	-10000	6	-187			12000	35	12.5%	12
4	31	20.9%	-8000	15	-149			16000	18	6.4%	16
5	32	21.6%	-6000	29	-112			20000	10		20
6	27	18.2%	-4000	74	-75			24000	14	5.0%	24
7	12	8.1%	-2000	171	-37			28000	5	1.8%	28
8	1	0.7%	0	258	0			32000	6	2.1%	32
TOTAL	148		2000	287	37			36000	3	1.1%	36
			4000	227	75			40000	4	1.4%	40
2-GATE	SORTS	133	6000	113	112			44000	2	0.7%	44
DETECTR	SORTS	FREQ%	8000	60	149			48000	0	0.0%	48
8			10000	12	187			52000	5	1.8%	52
9	9		12000	4	224			56000	3	1.1%	56
10	17		14000	2	261			50000	4	1.4%	60
11	27		16000	0	299			54000	3	1.1%	64
12	28		18000	0	336			58000	0	0.0%	68
13	27		20000	0	373			72000	1	0.4%	72
14	21	15.8%	22000	0	410			76000	0	0.0%	76
15	4	3.0%	24000	0	448			30000	2	0.7%	80
TOTAL	133	•	26000	0	485			34000	0	0.0%	84
			>28000	0	0			34000	0	0.0%	>84
CIMUADV	TOTALS		TOTAL	1259			1	TOTAL	281		
		ICLE EVENTS	276		SORTS BY	ONE CA	TE ON!	,	148		•
		TICLE EVENTS	449		SORTS BY				133		
		TED EVENTS	0		JUN 13 B1	140 0					
	0131K1D0	LU LILRIS	U								

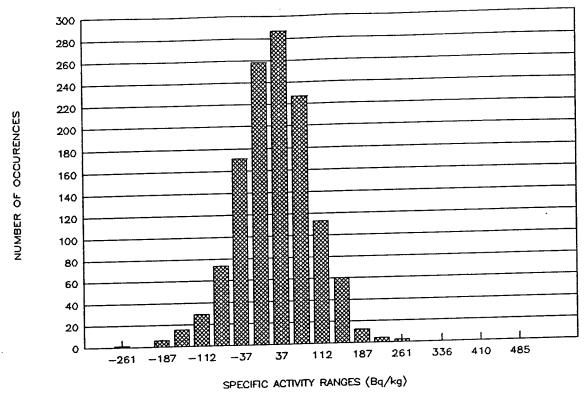
#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt

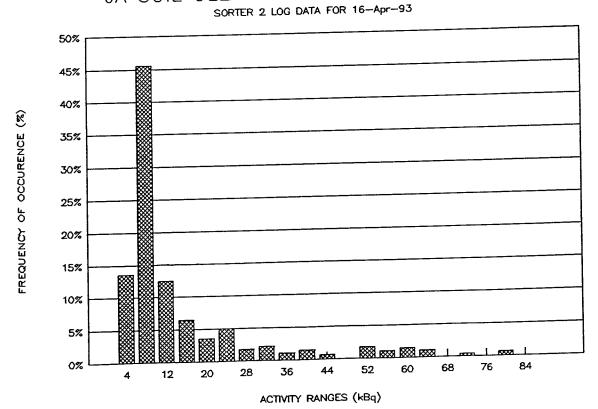
2-SEC COUNT PERIODS

3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 16-Apr-93



# JA SOIL CLEANUP PLANT HOT PARTICLES



A-160

AVERAGE BACKGOUND COUNT RATE  SORTERS SOIL DENSITY  1.5 tons/m²  GROUND SOIL DENSITY  1.65 tons/m²  CONTAMINATED  CONTAMINATED  CONTAMINATED  CLEAM  1.2 tons  1.2 ton	SORTER 1 15-Apr-93				
SORTER SOIL DEWSITY	AVERAGE BACKGROUND COUNT RATE	0.70 ±	0.02 c/sec		
MAXIMAM/SORT   0.02 tons					
MAXIMAM/SORT   11.2 tons   11.2 tons   13.6 kg   13.5 kg   13.5 kg   13.5 kg   13.6	GROUND SOIL DENSITY	1.65 tons/m <sup>3</sup>			
MAXIMM/SORT   2.7 kg   53.6 kg   10.7 kg   50.9 kg   5			CONTAMINATED	CLEAN	
MEIGHT RECOVERY OR VOLUME RECOVERY  EQUIVALENT SOIL-IN-GROUND  PARTICLE ACTIVITY (MAXIMUM ESTIMATE)  TOTAL MAXIMUM/SORT TOTAL MAXIMUM/SORT MINIMUM/SORT SPECIFIC ACTIVITY  MORK DAY START MORK DAY	MASS TOTAL		0.02 tons	11.2 ton	s
MAXIMAN SORT   MEN	MAXIMUM/SORT		2.7 kg	53.6 kg	
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)   TOTAL   399 kBq   MAXIMUM/SORT   77 kBq   4.2 kBq   7	MINIMUM/SORT		0.7 kg	50.9 kg	
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)  TOTAL  MAXIMUM/SORT  MINIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MORK DAY START  MORK DAY START  MORK DAY START  PLANT START-UP  MORK DAY START  MOR DAY START  MORK DAY STA	WEIGHT RECOVERY OR VOLUME RECOVERY	·			99.8%
TOTAL  MAXIMM/SORT  NINIMM/SORT  MAXIMM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  TOTAL SUL PROCESSING RECORDS (2-SEC and 20-SEC)  POMOPROCESS RECORDS (150 MID=0  NONPROCESS RECORDS (2-SEC and 20-SEC)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (150 MID=0  NONPROCESS RECORDS (2-SEC and 20-SEC)  TOTAL SOIL PROCESSING (2-SEC an	EQUIVALENT SOIL-IN-GROUND		0.02 yd <sup>3</sup>	8.9 yd <sup>3</sup>	8.9 yd <sup>3</sup> /day
MAXIMUM/SORT   77 kBq	PARTICLE ACTIVITY (MAXIMUM ESTIMATE)				
MINIMUM/SORT	TOTAL		399 kBq		
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT MAXIMUM/SORT SPECIFIC ACTIVITY  MORK DAY START O6:00 AM PLANT START-UP O6:00 AM PLANT START-UP PLANT START 11:30 AM  MORK DAY END START 50IL PROCESSING O6:46 AM END SOIL PROCESSING O7:56 AM LUNCH PERIOD  MORK HOURS ACTUAL PROCESS HOURS (total 20-sec records) ACTUAL PROCESS HOURS (total 20-sec records)  MORK HOURS ACTUAL PROCESS HOURS (total 20-sec records) ACTUAL PROCESS HOURS ACTUA	MAXIMUM/SORT		77 kBq		
MAXIMUM/SORT	MINIMUM/SORT		4.2 kBq		
MINIMUM/SORT SPECIFIC ACTIVITY 7,263 8q/kg (15)8q/kg  MORK HISTORY  MORK DAY START 06:00 AM MORK DAY END 05:30 PM PLANT START-UP 06:00 AM PLANT SHUT-DOWN 08:15 AM START SOIL PROCESSING 06:46 AM END SOIL PROCESSING 07:56 AM LUNCH START 11:30 AM LUNCH PERIOD 0.00 hr  MORK HOURS 2.3 hr AVAILABLE HOURS 2.3 hr ACTUAL PROCESS HOURS (total 20-sec records) 1.17 hr DOWN-TIME 1.08 hr TOTAL SYSTEM PAUSE 0.00 hr SHUT-DOWN 0.31 hr START-UP 0.78 hr SHUT-DOWN 0.31 hr PLANT PERFORMANCE 51.9% PRODUCTIVITY 10.1%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 230 NONPROCESS RECORDS (Test, calibration, etc) 2 20-SEC PROCESS RECORDS 210 TOTAL SORT 0 MD>0 & MND=0 NONPROCESS RECORDS 199 AMD>0 TOTAL SORT 192 AD=0 & MD>0  AD=0 & MD 0 UNEXPLAIN PAUSE  AD=0 & MD 0 UNEXPLAIN PAUSE  AD=0 & MD 0 UNEXPLAIN PAUSE  TIME TIME AD	DISPERSED + PARTICLE (REALISTIC ESTI	MATE) ACTIVITY	171 kBq	(164)kBq	
WORK HISTORY   WORK DAY START	MAXIMUM/SORT		57 kBq	7 kBq	
WORK HISTORY  WORK DAY START 06:00 AM WORK DAY END 05:30 PH PLANT START-UP 06:00 AM PLANT SHUT-DOWN 08:15 AM START SOIL PROCESSING 06:46 AM END SOIL PROCESSING 07:56 AM LUNCH START 11:30 AM LUNCH PERIOD 0.0 hr  WORK HOURS  AVAILABLE HOURS  ACTUAL PROCESS HOURS (total 20-sec records) 11.17 hr DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN PLANT PERFORMANCE PRODUCTIVITY 10.1%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 230 NONPROCESS RECORDS (2-SEC and 20-SEC) 220 SEC PROCESS RECORDS TOTAL SORT NO SORT SOME SORT UNEXPLAINED RECORDS  0 HD>0 & MND>0  11.8 AD>0& MD>0  UNEXPLAINED RECORDS  0 UNEXPLAINED RECORDS  AD=0 & MD 0 UNEXPLAINED PAUSE AD=0 & MD 0 TIME TIME TIME TIME NONE AD=0 & MD 0 UNEXPLAIN PAUSE TIME TIME TIME TIME TIME TIME NONE	MINIMUM/SORT		0 Bq	-8 kBq	
WORK DAY START   O6:00 AM	SPECIFIC ACTIVITY		7,263 Bq/kg	(15)Bq/i	kg
PLANT START-UP 06:00 AM PLANT SHUT-DOWN 08:15 AM START SOIL PROCESSING 06:46 AM END SOIL PROCESSING 07:56 AM LUNCH START 11:30 AM LUNCH PERIOD 0.0 hr  WORK HOURS 11.5 hr  AVAILABLE HOURS 2.3 hr  ACTUAL PROCESS HOURS (total 20-sec records) 1.17 hr  DOWN-TIME 1.08 hr  TOTAL SYSTEM PAUSE 0.00 hr  NONAVAILABLE HOURS 9.3 hr  START-UP 0.78 hr  SHUT-DOWN 0.31 hr  PLANT PERFORMANCE 51.9% PRODUCTIVITY 10.1%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 230  NOMPROCESS RECORDS 210  TOTAL SORT 0 MD>0 & MND=0  TOTAL SORT 192 AD=0 & MD=0 & MND>0  AD=0 & MD 0 0 UNEXPLAIN PAUSE  AD=0 & MD 0 0 UNEXPLAIN PAUSE  TIME TIME AD=0 & NONE	WORK HISTORY				
START SOIL PROCESSING   06:46 AM   END SOIL PROCESSING   07:56 AM   LUNCH START   11:30 AM   LUNCH PERIOD   0.0 hr	WORK DAY START	06:00 AM	WORK DAY END	05:30 PM	
LUNCH START   11:30 AM   LUNCH PERIOD   0.0 hr					
MORK HOURS	START SOIL PROCESSING	06:46 AM			
AVAILABLE HOURS  ACTUAL PROCESS HOURS (total 20-sec records)  1.17 hr  DOWN-TIME  1.08 hr  TOTAL SYSTEM PAUSE  0.00 hr  NONAVAILABLE HOURS  9.3 hr  START-UP  0.78 hr  SHUT-DOWN  0.31 hr  PLANT PERFORMANCE  PRODUCTIVITY  10.1%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  230  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  210  TOTAL SORT  0 MD>0 & MND=0  NO SORT  192 AD=0 & MD=0 & MND>0  NO SORT  UNEXPLAINED RECORDS  0 <ad<1kbq &="" md="">0  0 UNEXPLAIN PAUSE  AD=0 &amp; MD  0 NONE  AD=0 &amp; MD  0 NONE  NONE  AD=0 &amp; MD  0 TIME  TIME  NONE  NONE</ad<1kbq>	LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr	
ACTUAL PROCESS HOURS (total 20-sec records)  ACTUAL PROCESS HOURS (total 20-sec records)  DOWN-TIME  TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  230  NOMPROCESS RECORDS (2-SEC and 20-SEC)  230  NOMPROCESS RECORDS (20-SEC)  210  TOTAL SORT  NO SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 <ad<1 &="" kbq="" md="">0  UNEXPLAIN PAUSE  AD=0 &amp; MD  UNEXPLAIN PAUSE  AD=0 &amp; MD  UNEXPLAIN PAUSE  TIME  TIME  NO NO  NO  NO  NO  NO  NO  NO  NO  NO</ad<1>	WORK HOURS				
DOWN-TIME	AVAILABLE HOURS				
TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOWN  PLANT PERFORMANCE PRODUCTIVITY  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  230  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0-AD-1kBq & MD>0  AD-0 & MD 0  NONE  AD-0 & MD 0  NONE		(total 20-sec records)			
NONAVAILABLE HOURS   9.3 hr					
START-UP   0.78 hr					
SHUT-DOWN PLANT PERFORMANCE PRODUCTIVITY  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  AD=0 & MD > 0  AD=0 & MD > 0  TIME TIME AD<0 & MD > 0  NONE	•				
PLANT PERFORMANCE PRODUCTIVITY  10.1%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  230  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 <					
### PRODUCTIVITY 10.1%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 230  NONPROCESS RECORDS (Test, calibration, etc) 2  20-SEC PROCESS RECORDS 210  TOTAL SORT 0 MD>0 & MND=0  NO SORT 192 AD=0 & MD=0 & MND>0  SOME SORT 18 AD>0&0-MD   MOSOND MND=0					
NONPROCESS RECORDS   210   2   2   2   2   2   2   2   2   2					
NONPROCESS RECORDS   210   2   2   2   2   2   2   2   2   2		4 20 oco	270		
20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  192 AD=0 & MD=0 & MND>0  SOME SORT  18 AD>0&0 MD>0 & MND>0  MND>0 & MND>0  MND-0 & MND>0  MND-0 & MND>0  MND-0 & MND>0  UNEXPLAINED RECORDS  0 O <ad<1kbq &="" md="">0  UNEXPLAIN PAUSE  AD=0 &amp; MD  0 TIME  TIME  None  None</ad<1kbq>					
TOTAL SORT 0 MD>0 & MND=0  NO SORT 192 AD=0 & MD=0 & MND>0  SOME SORT 18 AD>0&0   UNEXPLAINED RECORDS 0 UNEXPLAIN PAUSE   0 <ad<1kbq &="" md="">0 0 UNEXPLAIN PAUSE   AD=0 &amp; MD 0 0 TIME TIME   AD&lt;0 &amp; MD 0 0</ad<1kbq>		n, etc)	_		
NO SORT 192 AD=0 & MD=0 & MND>0  SOME SORT 18 AD>0&0 <md<mndmax&mnd<mndmax &="" 0="" md="" o<ad<1kbq="" records="" unexplained="">0 0 UNEXPLAIN PAUSE  AD=0 &amp; MD 0 TIME TIME  AD&lt;0 &amp; MD 0 None None</md<mndmax&mnd<mndmax>					
SOME SORT       18 AD>0&0 <md<mndmax&mnd<mndmax< td="">         UNEXPLAINED RECORDS       0         0<ad<1kbq &="" md="">0       UNEXPLAIN PAUSE         AD=0 &amp; MD       0         AD&lt;0 &amp; MD</ad<1kbq></md<mndmax&mnd<mndmax<>			•	MND>0	
UNEXPLAINED RECORDS 0  0 <ad<1kbq &="" md="">0 0 UNEXPLAIN PAUSE  AD=0 &amp; MD 0 TIME TIME  AD&lt;0 &amp; MD 0 None None</ad<1kbq>					,
0 <ad<1kbq &="" md="">0</ad<1kbq>	the state of the s			MISSAGERU MINUMA	•
AD=0 & MD 0 TIME TIME AD<0 & MD 0 None None		0		INEXDI ATM	PAUSE
AD<0 & MD 0 None None	•		•		
<b>12</b>					
MU1_L <2 Kbd 2 13.6%				N/N IC	HOIR
	VCI_h <> KRd	3 13.0%			

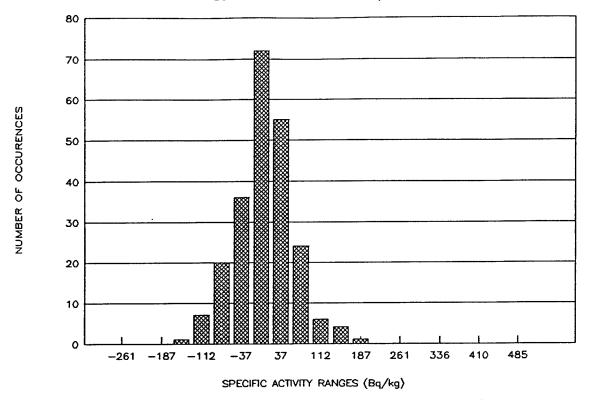
2-SEC COUNT PERIODS  2-SEC RECORDS WITH SORTS  2-SEC RECORDS WITH POSITIVES IN >1  2 DETECTORS  3 DETECTORS  4 DETECTORS  5 DETECTORS  6 DETECTORS  7 DETECTORS  8 DETECTORS	DETECTOR 6 2 0 0 0 0	(ACT_P >0 kBq)  75.0% 25.0% 0.0% 0.0% 0.0% 0.0% 0.0%
TOTAL  NET 2-SEC RECORDS WITH SORTS  2-SEC PERIODS WITH NO SORTS  AVG TIME BETWEEN 2-SEC SORTS	8 12 2,088 350.0	

1-GATE S	ORTS SORTS	9 FREQ%	ACT_ND (Bq)	NUMBER (#)	SPEĊ_A (Bq/kg)	ACT_P (Bq)		FREQ%	ACT_P (kBq)
1	0	0.0%	-14000	0	-261	4000		0.0%	4 8
2	1	11.1%	-12000	0	-224	8000		45.0%	12
, 3	1	11.1%	-10000	0	-187	12000		5.0%	16
4	3	33.3%	-8000	1	-149	16000		15.0%	
5	4	44.4%	-6000	6	-112	20000		10.0%	20
6	0	0.0%	-4000	18	-75	24000		5.0%	24
7	0	0.0%	-2000	34	-37	28000		0.0%	28
8	0	0.0%	0	69	0	32000	) 0	0.0%	32
_	9	••••	2000	54	37	36000	) 0	0.0%	36
TOTAL	,		4000	23	75	4000	) 0	0.0%	40
		11	6000	6	112	4400	) 1	5.0%	44
2-GATE		FREQ%	8000	1		4800	g 0	0.0%	48
DETECTR	SORTS	rkews	10000	0	187	5200	0 1	5.0%	52
8		0.0%	12000	0		5600	0 0	0.0%	56
9	0		14000	0		6000	0 0	0.0%	60
10	1	9.1%	16000	0	_	6400	0 1	5.0%	64
11	3	27.3%	18000	0		6800	0 0	0.0%	68
12	5	45.5%	• • • • •	o o		7200	0 0	0.0%	72
13	1	9.1%	20000	C		7600	0 0	0.0%	76
14	0	0.0%	22000			8000	0 1	5.0%	80
15	1	9.1%		(	· <u>-</u>	8400		0.0%	84
TOTAL	11		26000			>8400		0.0%	>84
			>28000	(	-	TOTA		)	
			TOTAL	217	2	1017			
SUMMARY	TOTALS					OUE CATE ONLY	9	)	
	HOT PARTICL		21			ONE GATE ONLY	11		
	MULTIPARTIC	LE EVENTS			SORTS BY	TWO GATES	•	•	
	DISTRIBUTED	EVENTS	0						

#### REC CODE EXPLANATION

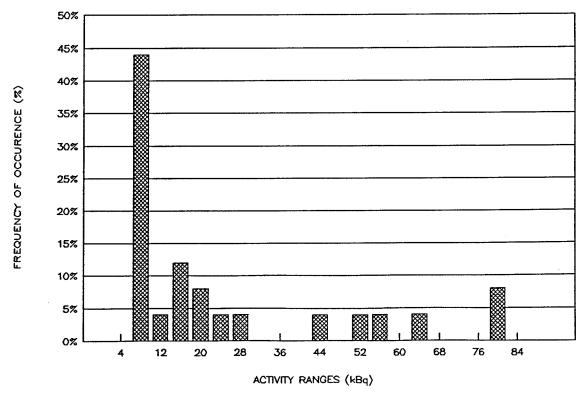
- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 1 LOG DATA FOR 15-Apr-93



# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 15-Apr-93



A-163

SORTER 2	15-Apr-93									
AVERAGE BACKGRO	LIND COUNT RATE		0.75	±	0.04	c/sec				
SORTER SOIL DEN			1.15	tons/m	5					
GROUND SOIL DEN			1.65	tons/m	2					
anoono cora con						CONTAM	INATED	CLEAN		
MASS TOTAL							tons	11.3		
MAXIMUM/	SORT					56.2	-	53.6	_	
MINIMUM/						0.7	' kg	51.6	Kg	
										99.3%
WEIGHT RECOVERY	OR VOLUME RECOVERY							8.9	v/d3	9.0 yd3/day
EQUIVALENT SOIL	-IN-GROUND					0.07	yd³	0.7	<b>,</b> u	/10 /C / /
PARTICLE ACTIVI	TY (MAXIMUM ESTIMATE	)				2//	kBq			
TOTAL							kBq			
' MAXIMUM/	SORT						kBq			
MINIMUM/	SORT					٠.٠	, KB4			
			.,			130	) kBq	36	kBq	
DISPERSED + PAR	TICLE (REALISTIC EST	IMATE) ACII	ATIA				kBq	9	kBq	
MAXIMUM/							) Bq	-8	kBq	
MINIMUM/							2 Bq/kg	3	Bq/kg	
SPECIFIC	CACTIVITY					.,				
WORK HISTORY WORK DAY	CTART	06:00 AM				WORK D	AY END	05:30 PM		
PLANT S1		06:00 AM					SHUT-DOWN	08:15 AM		
	OIL PROCESSING	06:46 AM				END SO	OIL PROCESSING	07:56 AM		
LUNCH ST		11:30 AM				LUNCH	PERIOD	0.0	hr	
CONON O										
	WORK HOURS						11.5 hr			
	AVAILABLE HOURS						2.3 hr			
	ACTUAL PROCESS HOU	RS (total 20	-sec 1	records	)		1.18 hr 1.07 hr			
	DOWN-TIME						0.00 hr			
	TOTAL SYSTEM PAUSE						9.3 hr			
	NONAVAILABLE HOURS						0.78 hr			
	START-UP						0.30 hr			
	SHUT-DOWN						52.3%			
	PLANT PERFORMANCE						10.2%			
	PRODUCTIVITY						1012			
	CESSING RECORDS (2-S	cc and 20-Si	:c)				231			
TOTAL SOIL PRO	ORDS (Test, calibrat	ion etc)	,				0			
	PROCESS RECORDS	,,				21	2			
20-356	TOTAL SORT						1 MD>0 & MND=0			
	NO SORT						2 AD=0 & MD=0			
	SOME SORT					2	9 AD>0&0 <md<mn< td=""><td>Omax&amp;MND&lt;</td><td>(NDmax</td><td></td></md<mn<>	Omax&MND<	(NDmax	
	UNEXPLAINED RECORD	s					0			24107
	0 <ad<1kbq &="" md="">0</ad<1kbq>	0						UNEXPLA	IN	PAUSE
	& 0=0A	MD 0						TIME		TIME
	& 0>DA	MD 0						None		None
	ACT_P <5 kBq	5	26.	3%						

2,120

_						•					
		2-SEC RECORD	S WITH S	ORTS		19	(ACT_F	) >0 kBq)			
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR					
		2	DETECTO	RS	4		80.0%				
		3	DETECTO	RS	1		20.0%	•			
		4	DETECTO	RS	0		0.0%				
		5	DETECTO	RS	0		0.0%				
		6	DETECTO	RS	0		0.0%				
		7	DETECTO	RS	0		0.0%				
		8	DETECTO	RS	0		0.0%				
		T	OTAL			5					
		NET 2-SEC RE	CORDS WI	TH SORTS		14					
		2-SEC PERIOD	S WITH N	O SORTS		2,106					
		AVG TIME BET	WEEN 2-SI	EC SORTS		302.9	sec				
1-GATE S	ORTS	9	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)
1	0	0.0%	-14000	0	-261			4000	2		4
2	1	11.1%	-12000	0	-224			8000	8	42.1%	8
3	3	33.3%	-10000	0	-187			12000	3	15.8%	12
4	2	22.2%	-8000	1	-149			16000	3	15.8%	16
5	2	22.2%	-6000	3	-112			20000	0	0.0%	20
6	1	11.1%	-4000	12	-75			24000	1	5.3%	24
7	0	0.0%	-2000	32	-37			28000	0	0.0%	28
8	0	0.0%	0	56	0			32000	0	0.0%	32
TOTAL	9		2000	55	37			36000	0	0.0%	36
			4000	33	75			40000	0	0.0%	40
2-GATE S	ORTS	10	6000	14	112			44000	1	5.3%	44
DETECTŔ	SORTS	FREQ%	8000	4	149			48000	0	0.0%	48
8			10000	2	187			52000	0	0.0%	52
9	0	0.0%	12000	0	224			56000	1	5.3%	56
10	2	20.0%	14000	0	261			60000	0	0.0%	60
11	2	20.0%	16000	0	299			64000	0	0.0%	64
12	3	30.0%	18000	0	336			68000	0	0.0%	68
13	3	30.0%	20000	0	373			72000	0	0.0%	72
14	0	0.0%	22000	0	410			76000	0	0.0%	76
15	0	0.0%	24000	0	448			80000	0	0.0%	80
TOTAL	10		26000	0	485			84000	0	0.0%	84

SUMMARY TOTALS

(I IUINES			
HOT PARTICLE EVENTS	20	SORTS BY ONE GATE ONLY	9
MULTIPARTICLE EVENTS	22	SORTS BY TWO GATES	10
DISTRIBUTED EVENTS	83		

0

212

0

#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

>28000

TOTAL

2.00 Empty belt

2-SEC COUNT PERIODS

3.00 Test (No process soil)

0.0%

0

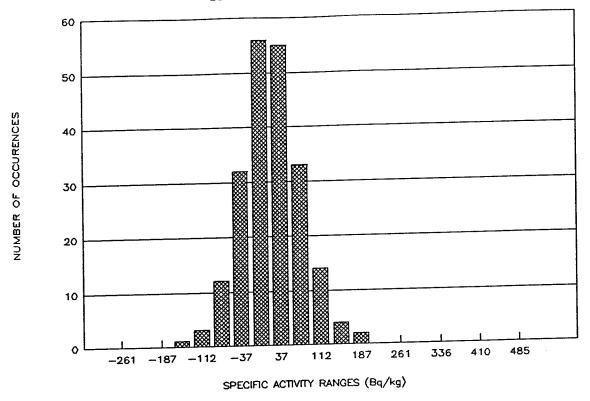
19

>84000

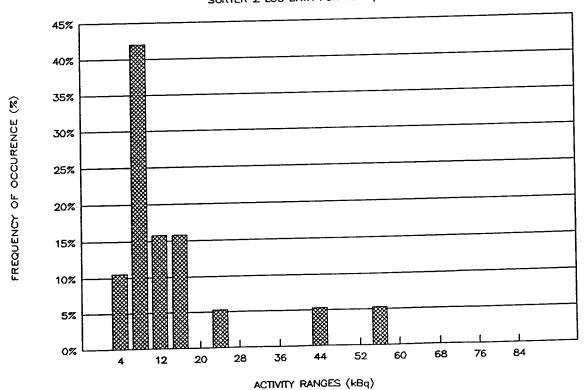
TOTAL

>84

SORTER 2 LOG DATA FOR 15-Apr-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 15-Apr-93



A-166

AVERAGE BACKGROUND COUNT RATE  SORTER SOIL DENSITY  1.15 cons/m²  CROUND SOIL DENSITY  1.65 cons/m²  CROUND SOIL DENSITY  1.65 cons/m²  CONTAMINATED  CLEAN  MASS TOTAL  MASS	SORTER 1 14-Apr-93				·
MASS TOTAL   0.17 tons	AVERAGE BACKGROUND COUNT RATE	0.70 .±	0.01 c/sec		
MASS TOTAL  MAXIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  TOTAL  MAXIMUM/SORT  TOTAL  MAXIMUM/SORT  TOTAL  MAXIMUM/SORT  TOTAL  MAXIMUM/SORT  MINIMUM/SORT  MORE DEPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORE MORE BY PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORE MORE MORE BY THE BY TH	SORTER SOIL DENSITY	1.15 tons/m <sup>3</sup>	3		
MASS TOTAL  MAXIMUM/SORT  MXXIMUM/SORT  MXXIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MAXIMUM/SORT  MAXIMUM/SORT  TOTAL  TOTAL  MXXIMUM/SORT  MXXIMUM/SORT  TOTAL  MXXIMUM/SORT  TOTAL  MXXIMUM/SORT  MXX		1.65 tons/m <sup>3</sup>	1		
MIXIMUM/SORT   3.3 kg   53.6 kg   1			CONTAMINATED	CLEAN	
MILIMUM/SORT   3.3 kg   53.6 kg   10.7 kg   50.2 kg	MASS TOTAL		0.17 tons	45.6 ton	s
MINIMUM/SORT 0.7 kg 50.2 kg  MEIGHT RECOVERY OR VOLUME RECOVERY EQUIVALENT SOIL-IN-GROUND 0.14 yd¹ 36.1 yd² 36.3 yd³/day  PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL 3,957 kBq TOTAL 3,957 kBq TOTAL 3,957 kBq TOTAL MAXIMUM/SORT 783 kBq MINIMUM/SORT 2.4 kBq  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY 1,633 kBq 1,168 kBq MAXIMUM/SORT 6666 kBq 17 kBq MAXIMUM/SORT 608 kBq/kg 26 8g/kg  MORK HISTORY  MORK DAY START 06:55 AM MORK DAY END 05:30 PM START SOIL PROCESSING 12:16 PM END START SOIL PROCESSING 11:30 AM PLANT SMIT-DOWN 05:30 PM LUNCH START 11:30 AM LUNCH PERIOD 0.55 hr  MORK HOURS 11:30 AM LUNCH PERIOD 0.55 hr  MORK HOURS 11:30 AM 10.1 hr ACTUAL PROCESS HOURS (total 20-sec records) 4.74 hr TOTAL STITEM PAUS 5.32 hr NONAVALLABLE HOURS 7.32 hr SINT-DOWN 11:18 9.5.32 hr NONAVALLABLE HOURS 10.4 pROCESS HOURS (10 tal 20-sec records) 10.1 hr PLANT PERFORMANCE 9.0.0 hr START-UP 5.335 hr SINT-DOWN 0.0.49 hr PLANT PERFORMANCE 47.11x TOTAL SOIL PROCESS RECORDS (2-SEC and 20-SEC) 1,032 NONPROCESS RECORDS (10 tal 20-SEC) 1,032 NONPROCESS RECORDS (2-SEC and 20-SEC) 1,032 NONPROCESS RECORDS (2-SEC and 20-SEC) 1,032 NONPROCESS RECORDS (10 tal 20-SEC) 1,032 NONPROCES			3.3 kg	53.6 kg	
MEIGHT RECOVERY OR VOLUME RECOVERY   0.14 yd²   36.1 yd²   36.3 yd²/day			0.7 kg	50.2 kg	
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)   TOTAL   3,957 kBq					
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)  TOTAL  MAXIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MORK MISTORY  MORK DAY START  MOR	WEIGHT RECOVERY OR VOLUME RECOVERY				99.6%
TOTAL  MAXIMIM/SORT  MINIMIM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMIM/SORT  MAXIMIM/SORT  MAXIMIM/SORT  SPECIFIC ACTIVITY  MORK DAY START  MORK DAY START  MORK DAY START  PLANT START-UP  MORK DAY START  MORK BOAY END  MORK DAY START  MORK BOAY END  MORK DAY E	EQUIVALENT SOIL-IN-GROUND		0.14 yd³	36.1 yd <sup>3</sup>	36.3 yd3/day
TOTAL  MAXIMIM/SORT  MINIMIM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMIM/SORT  MAXIMIM/SORT  MAXIMIM/SORT  SPECIFIC ACTIVITY  MORK DAY START  MORK DAY START  MORK DAY START  MORK DAY START  PLANT START-UP  MORK DAY START  MORK BOAY END  MORK DAY START  MORK BOAY END  MORK DAY START  MORK HOURS  START SOIL PROCESSING  LUNCH START  MORK HOURS  MORK HOU					
MAXIMUM/SORT MINIMUM/SORT MINIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  AXMIMUM/SORT MINIMUM/SORT MINIMUM/SORT MINIMUM/SORT MINIMUM/SORT MINIMUM/SORT MORK BQ 17 KBq MORK DBQ -7 KBq P, 544 Bq/kg 26 Bq/kg   WORK HISTORY  WORK DAY START O6:55 AM MORK DAY START PLANT START-UP O6:55 AM PLANT SHUT-OOMN START SOIL PROCESSING 12:16 PM END SOIL PROCESSING 05:00 PM LUNCH START MORK HOURS MORK		<b>:</b> )	7 057 1 5		
### DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY    1,633 kBq	· TOTAL		•		•
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT SPECIFIC ACTIVITY  MORK HISTORY  MORK HISTORY  MORK DAY START O6:55 AM PLANT START-UP O6:55 AM START SOIL PROCESSING 12:16 PM LUNCH START DOMN-TIME ACTUAL PROCESS HOURS (total 20-sec records) ONN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SINT-DOUN TOTAL SYSTEM PAUSE NONAVAILABLE HOURS AUTILIABLE HOURS START-UP SINT-DOUN TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SINT-DOUN START-UP SOUNCTIVITY 47.1%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) NONPROCESS RECORDS TOTAL SORT NO SORT NO SORT SOME SORT TOTAL SORT UNEXPLAINED RECORDS O4D<5 MND-0 & MND-0 UNEXPLAINED RECORDS O4D<5 MND 0 UNEXPLAINED RECORDS O4D-5 MND 0 UNEXPLAINED RECORDS O5:30 PM PLAIT SEMPLED TO THE RECORDS O5:30 PM PLAIT SEMPLED TO THE RECORDS O5:30 PM PLAIT SEMPLED TO THE RECORDS O5	MAXIMUM/SORT		•		
MAXIMUM/SORT   606 kBq   17 kBq   17 kBq   11 kBq   11 kBq   17	M1NIMUM/SORT		2.4 kBq		
MAXIMUM/SORT   606 kBq   17 kBq   17 kBq   11 kBq   11 kBq   17 kBq   18 kBq   17 kBq   18 kBq   17 kBq   18 kBq   17 kBq   18	DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTIVITY	1.633 kBa	1,168 kBq	
MINIMUM/SORT   9,544 Bq/kg   26 Bq/kg   2					
SPECIFIC ACTIVITY   9,544 Bq/kg   26 Bq/kg   WORK HISTORY	•		•	-7 kBq	
WORK HISTORY   WORK DAY START   06:55 AM	•		•		
WORK DAY START   06:55 AM	3, 20, 10, 10, 10, 10, 10, 10, 10, 10, 10, 1			·	
PLANT START-UP 06:55 AM PLANT SHUT-DOWN 05:30 PM START SOIL PROCESSING 12:16 PM END SOIL PROCESSING 05:00 PM LUNCH START 11:30 AM LUNCH PERIOD 0.5 hr  WORK HOURS 10.1 hr  AVAILABLE HOURS 10.1 hr  ACTUAL PROCESS HOURS (total 20-sec records) 4.74 hr  DOWN-TIME 5.34 hr  TOTAL SYSTEM PAUSE 5.35 hr  NONAVAILABLE HOURS 0.0 hr  START-UP 5.35 hr  SHUT-DOWN 0.49 hr  PLANT PERFORMANCE 47.1% 47.1%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 1,032  NOMPROCESS RECORDS 454  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 1,032  NOMPROCESS RECORDS 140 0 MD>0 & MND=0  TOTAL SORT 0 MD>0 & MND=0  AD=0 & MD 0 1 UNEXPLAIN PAUSE  AD=0 & MD 0 0 UNEXPLAIN PAUSE  TIME TIME TIME AD=0 & MD 0 0 UNEXPLAIN PAUSE TIME TO TAKE TO	WORK HISTORY				
START SOIL PROCESSING   12:16 PM	WORK DAY START	06:55 AM	WORK DAY END	05:30 PM	
LUNCH START   11:30 AM   LUNCH PERIOD   0.5 hr	PLANT START-UP	06:55 AM	PLANT SHUT-DOWN	05:30 PM	
WORK HOURS	START SOIL PROCESSING	12:16 PM	END SOIL PROCESSING	05:00 PM	
AVAILABLE HOURS  ACTUAL PROCESS HOURS (total 20-sec records)  ACTUAL PROCESS HOURS (total 20-sec records)  4.74 hr  DOWN-TIME  5.34 hr  TOTAL SYSTEM PAUSE  5.52 hr  NONAVAILABLE HOURS  0.0 hr  START-UP  5.35 hr  SHUT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY  47.1%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (Test, calibration, etc)  4  20-SEC PROCESS RECORDS  854  TOTAL SORT  NO SORT  NO SORT  10 MD>0 & MND=0  TOTAL SORT  UNEXPLAINED RECORDS  0 <ad<1kbq &="" md="">0  1</ad<1kbq>	LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr	
AVAILABLE HOURS  ACTUAL PROCESS HOURS (total 20-sec records)  ACTUAL PROCESS HOURS (total 20-sec records)  4.74 hr  DOWN-TIME  5.34 hr  TOTAL SYSTEM PAUSE  5.52 hr  NONAVAILABLE HOURS  0.0 hr  START-UP  5.35 hr  SHUT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY  47.1%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  NO SORT  10 MD>0 & MND=0  TOTAL SORT  NO SORT  110 AD=0 & MD=0 & MND>0  O <ad<1kbq &="" md="">0  1 INE  AD=0 &amp; MD  O 16:06:08  O 6:55</ad<1kbq>	Alegaic Media		: 10 1 hn		
ACTUAL PROCESS HOURS (total 20-sec records)  ACTUAL PROCESS HOURS (total 20-sec records)  DOMN-TIME  TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  START-UP  SHUT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS  TOTAL SORT  NO SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0-AD<1kBq & MD>0  TIME  AD=0 & MD 0  16:06:08  DO6:555		•			
DOWN-TIME   5.34 hr     TOTAL SYSTEM PAUSE   5.52 hr     NONAVAILABLE HOURS   0.0 hr     START-UP   5.35 hr     SHUT-DOWN   0.49 hr     PLANT PERFORMANCE   47.1%     PRODUCTIVITY   47.1%     TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)   1,032     NONPROCESS RECORDS (Test, calibration, etc)   4     20-SEC PROCESS RECORDS   854     TOTAL SORT   0 MD>0 & MND=0     NO SORT   714 AD=0 & MD=0 & MND>0     SOME SORT   140 AD>0&0<  MND=MND=MND=MND=MND=MND=MND=MND=MND=MND=	•	00 (4-4-1 20da)			
TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  START-UP  SHUT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 < AD<1 kBq & MD>0  TIME  TIME  AD=0 & MD     0  TIME  TIME  TIME  AD=0 & MD     0  TIME  TIME  AD=0 & MD     0  TIME  TIME  TIME  AD=0 & MD=0 & MC-55		s (total 20-sec records)	**		
NONAVAILABLE HOURS   0.0 hr					
START-UP   5.35 hr					
SHUT-DOWN PLANT PERFORMANCE PLANT PERFORMANCE PRODUCTIVITY  47.1%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 < AD<1kBq & MD>0  TIME AD=0 & MD 0  16:06:08  06:55	•				
PLANT PERFORMANCE PRODUCTIVITY  47.1%  47.1%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  1,032  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  10 MD>0 & MND=0  NO SORT  10 MD>0 & MND=0  NO SORT  140 AD>0&0-0 & MND=0  O <ad<18bq &="" md="">0  1 UNEXPLAINED RECORDS  AD=0 &amp; MD 0  16:06:08  06:55</ad<18bq>					
PRODUCTIVITY 47.1%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 1,032  NONPROCESS RECORDS (Test, calibration, etc) 4  20-SEC PROCESS RECORDS 854  TOTAL SORT 0 MD>0 & MND=0  714 AD=0 & MD=0 & MND>0  SOME SORT 140 AD>0&0 < MND=0 AD>0&0 < MND=0  140 AD>0&0 < MD=0 AD>0&0 < MND=0 AD>0  150 AD<1kBq & MD>0 1		•			
TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  AD=0 & MD>0  AD=0 & MD>0  TIME  AD<0 & MD>0  TIME  TIME  TIME  TIME  TOTAL SORT  AD TOTAL SORT  TOTAL SORT  O MD>0 & MND=0  TOTAL SORT  AD TOTAL SORT  O MD>0 & MND=0  TIME  TIME  TIME  TOTAL SORT  AD TOTAL SORT  O MD>0 & MND=0  TIME  TIME  TIME  TOTAL SORT  TOTAL SORT  AD TOTAL SORT  AD TOTAL SORT  TOTAL SORT  AD TOTAL SORT  TOTAL SORT  TOTAL SORT  AD TOTAL SORT  TOTAL SORT  TOTAL SORT  TOTAL SORT  AD TOTAL SORT  TO					
NONPROCESS RECORDS   4	PRODUCTIVITY		47.1%		
NONPROCESS RECORDS   4	TOTAL SOIL PROCESSING RECORDS (2-SE	C and 20-SEC)	1,032		
20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 < AD<1kBq & MD>0  AD=0 & MD → 0 & MND=0  TIME  TIME  TIME  AD<0 & MD → 0 & MND=0  TIME  TIME  TIME  AD<0 & MD → 0 & MD → 0 & MND=0  TIME  TIME  TOTAL SORT  0 MD>0 & MD=0 & MND>0  TIME  TIME  TOTAL SORT  140 AD>0 & MD=0 & MND>0  TIME  TIME  16:06:08 06:55			*		
TOTAL SORT		•	854		
NO SORT       714 AD=0 & MD=0 & MND>0         SOME SORT       140 AD>0&0       MNDmax&MND       MNDmax         UNEXPLAINED RECORDS       0         0       UNEXPLAIN       PAUSE         AD=0 & MD       0       TIME       TIME         AD<0 & MD			0 MD>0 & MND=0		
SOME SORT       140 AD>0&0 < MD < MND max & MND < MND max			714 AD=0 & MD=0 8	& MND>0	
UNEXPLAINED RECORDS 0  0 < AD < 1 kBq & MD > 0			140 AD>0&0 <md<mn< td=""><td>Omax&amp;MND<mndma< td=""><td>x</td></mndma<></td></md<mn<>	Omax&MND <mndma< td=""><td>x</td></mndma<>	x
0 <ad<1kbq &="" md="">0 1 UNEXPLAIN PAUSE AD=0 &amp; MD 0 TIME TIME AD&lt;0 &amp; MD 0 16:06:08 06:55</ad<1kbq>		•	0		
AD=0 & MD 0 TIME TIME AD<0 & MD 0 16:06:08 06:55				UNEXPLAIN	PAUSE
AD<0 & MD 0 16:06:08 06:55	•				TIME
47 44	· ·			16:06:08	06:55
					17:00

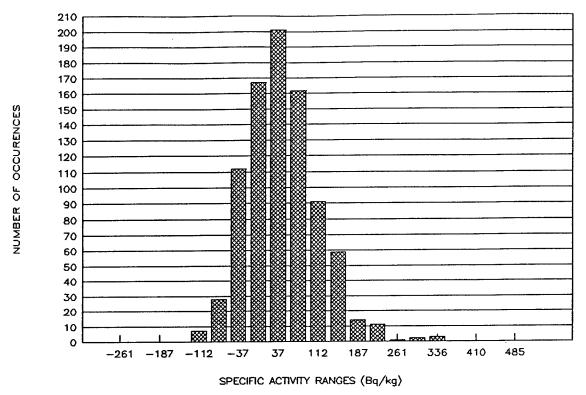
2-SEC COUNT PERIODS	8,54	
2-SEC RECORDS WITH SORTS	17	B (ACT_P >0 kBq)
2-SEC RECORDS WITH POSITIVES	IN >1 DETECTO	R
2 DETECTORS	36	73.5%
3 DETECTORS	9	18.4%
4 DETECTORS	2	4.1%
5 DETECTORS	2	4.1%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL	-4	9
NET 2-SEC RECORDS WITH SORTS	12	9
2-SEC PERIODS WITH NO SORTS	8,41	1
AVG TIME BETWEEN 2-SEC SORTS	132.	4 sec

4 4475 0	onto	91	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
1-GATE S		FREQ%	(Bq)		(Bq/kg)	(Bq)	(#)		(kBq)
DETECTR	SORTS	PREUM	(bq)	(",	(- · · · · · · ·				
	1	1.1%	-14000	0	-261	4000	38	21.3%	4
1	5	5.5%	-12000	0	-224	8000	69	38.8%	8
2	5 11	12.1%	-10000	0	-187	12000	12	6.7%	12
3	20	22.0%	-8000	0	-149	16000	19	10.7%	16
4	24	26.4%	-6000	7	-112	20000	5	2.8%	20
5	24 15	16.5%	-4000	28	-75	24000	7	3.9%	24
6	13	14.3%	-2000	112		28000	4	2.2%	28
7		2.2%	0	167		32000	4	2.2%	32
8	2	2.24	2000	201	37	36000	2	1.1%	36
TOTAL	91		4000	162		40000	1	0.6%	40
		87	6000	91		44000	0	0.0%	44
2-GATE S		FREQ%	8000	59		48000	3	1.7%	48
DETECTR	SORTS	FKEW&	10000	14		52000	1	0.6%	52
8	•	2.3%	12000	11		56000	2	1.1%	56
9	2	8.0%	14000	1		60000	2	1.1%	60
10	7		16000	2		64000	2	1.1%	64
11	17	19.5%	18000	3		68000	0	0.0%	68
12	17	19.5%	20000	0		72000	0	0.0%	72
13	18	20.7%		0		76000	0	0.0%	76
14	15	17.2%	24000	0		80000	0	0.0%	80
15	11	12.6%	26000	C		84000	1	0.6%	84
TOTAL	87		>28000	c		>84000	6	3.4%	>84
	•			858	•	TOTAL	178	1	
			TOTAL	050	,				
SUMMARY			177		SORTS RY	ONE GATE ONLY	91		
	HOT PARTICE					TWO GATES	87	•	
	WLTIPARTIC				30/13 01				
1	DISTRIBUTED	EVENTS	0						

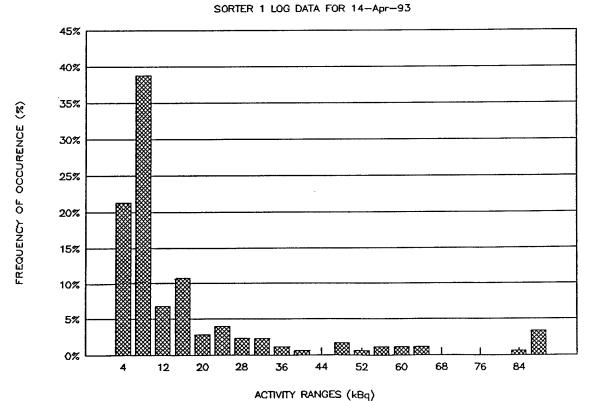
## REC .CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 1 LOG DATA FOR 14-Apr-93



# JA SOIL CLEANUP PLANT HOT PARTICLES



A-169

SORTER 2 14-Apr-93				
AVERAGE BACKGROUND COUNT RATE	0.77 ± 0.0	04 c/sec		
SORTER SOIL DENSITY	1.15 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³		CLEAN	
		CONTAMINATED	CLEAN 45.5 tons	
MASS TOTAL		0.26 tons		
MAXIMUM/SORT		4.7 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	48.9 kg	
				99.4%
WEIGHT RECOVERY OR VOLUME RECOVERY			36.0 yd3	36.2 yd3/day
EQUIVALENT SOIL-IN-GROUND		0.21 yd <sup>3</sup>	30.0 yu	30.2 /2 /22/
PARTICLE ACTIVITY (MAXIMUM ESTIMATION	<b>E)</b>	. == =		
TOTAL		4,326 kBq		
MAXIMUM/SORT		503 kBq		
MINIMUM/SORT		2.7 kBq		
		1,951 kBq	2,041 kBq	
DISPERSED + PARTICLE (REALISTIC ES	TIMATE) ACTIVITY	375 kBq	17 kBq	
MAXIMUM/SORT		0 Bq	-9 kBq	
MINIMUM/SORT		7,520 Bq/kg	45 Ba/kg	
SPECIFIC ACTIVITY		1,320 pd va		
WORK HISTORY	-	WORK DAY END	05:30 PM	
WORK DAY START	06:55 AM	PLANT SHUT-DOWN	05:30 PM	
PLANT START-UP	06:55 AM		05:00 PM	
START SOIL PROCESSING	12:16 PM	LUNCH PERIOD	0.5 hr	
LUNCH START	11:30 AM			
TOOK HOUSE		10.1 hr		
WORK HOURS AVAILABLE HOURS		10.1 hr		
ACTUAL PROCESS HOL	RS (total 20-sec records)	4.74 hr		
DOWN-TIME	(000=1 = 1	5.34 hr		
TOTAL SYSTEM PAUSE	:	5.34 hr		
NONAVAILABLE HOURS		0.0 hr		
START-UP		5.35 hr		
SHUT-DOWN		0.50 hr		
PLANT PERFORMANCE		47.0%		
PRODUCTIVITY		47.0%		
•				
TOTAL SOIL PROCESSING RECORDS (2-5	SEC and 20-SEC)	1,045		
NONPROCESS RECORDS (Test, calibrate	tion, etc)	4		
20-SEC PROCESS RECORDS		853		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		624 AD=0 & MD=0 229 AD>0&0 <md<mn< td=""><td></td><td></td></md<mn<>		
SOME SORT			UIIIAXOARIO 4 MONOS	
UNEXPLAINED RECOR		0	UNEXPLAIN	PAUSE
0 <ad<1kbq &="" md="">0</ad<1kbq>	1		TIME	TIME
AD=0 &			14:48:49	06:55
& 0>DA				
ACT_P <5 kBq	49 25.5%			

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8,530

	2-356 60	ONI PERIODS				0,,,,,0					
		2-SEC RECORD	S WITH S	ORTS		192	(ACT_P	>0 kBq)			
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR					
		2	DETECTO	RS	45		90.0%				
		3	DETECTO	RS	5		10.0%				
		4	DETECTO	RS	0		0.0%				
		5	DETECTO	RS	0		0.0%				
		6	DETECTO	RS	0		0.0%				
		7	DETECTO	RS	0		0.0%				
•		8	DETECTO	RS	0		0.0%				
		T	OTAL			50		-			
		NET 2-SEC RE	CORDS WI	TH SORTS		142					
		2-SEC PERIOD	S WITH N	O SORTS		8,388					
		AVG TIME BET	WEEN 2-S	EC SORTS		120.1	sec				
1-GATE	SORTS	99	ACT_ND		SPEC_A			ACT_P		FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(pg)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)
1	1	1.0%	-14000	0	-261			4000	15	7.8%	4
2	9		-12000	0	-224		.•	8000	85	44.3%	8
3	20		-10000	2	-187			12000	24		12
4	22		-8000	3	-149			16000	20		16
5	24		-6000	2	-112	•		20000	8		20
6	14		-4000	19	-75			24000	6		24
7	8		-2000	53	-37			28000	4		28
8	1		0	129	0			32000 32000	3		32
TOTAL	99		2000	192	37			36000	1		36
TOTAL	77		4000	197				40000	4		40
2-GATE	CODIC	93	6000	147				44000	3		44
DETECTR		•	8000	62	149			48000	0		48
8	SORTS	I KEGA	10000	28	187			52000	3		52
. 9	2	2.2%	12000	16	224			56000	0		56
10	14		14000	4	261			60000	2		60
11	22		16000	2	299			64000	1		64
12	15		18000	1	336			68000	2		68
13	24		20000	0	373			72000	0		72
14	13		22000	0	410			76000	1		76
15	· 3		24000	0	448			80000	2		80
	93		26000	Ō	485			84000		0.5%	84
TOTAL	73		>28000	0	0			84000	7		>84
			TOTAL	857	·			TOTAL	192		- 04
SUMMARY	TOTALS		IOIAL	100				IVIAL	176		
		ICLE EVENTS	189		SORTS BY	ONE G	ATE ONL	Y	99		
		TICLE EVENTS	196		SORTS BY				93		
		TED EVENTS	0					•			
`			_								

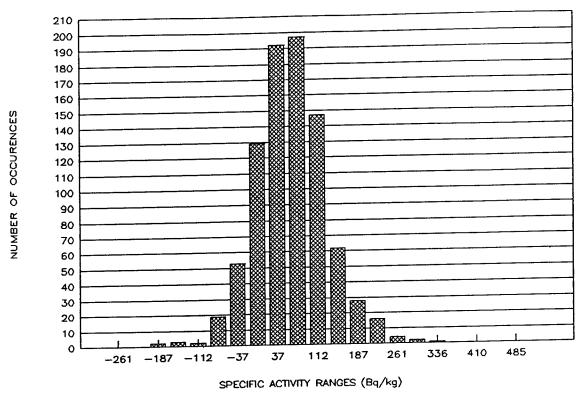
#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt

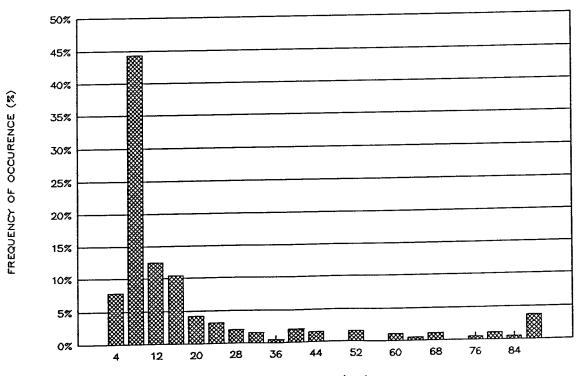
2-SEC COUNT PERIODS

3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 14-Apr-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 14-Apr-93



ACTIVITY RANGES (kBq)

A-172

SORTER 1 13-Apr-93				
AVERAGE BACKGROUND COUNT RATE	0.70 ± 0.0	03 c/sec		
SORTER SOIL DENSITY	1.15 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³			
		CONTAMINATED	CLEAN	
MASS TOTAL		10.00 tons	87.2 tons	
MAXIMUM/SORT		56.2 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	44.2 kg	
				89.7%
WEIGHT RECOVERY OR VOLUME RECOVERY		7.92 yd³	69.1 yd³	77.1 yd³/day
EQUIVALENT SOIL-IN-GROUND		7.72 yu	07.1 Yu	77.1 ya 7day
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	•			
TOTAL		20,678 kBq		
MAXIMUM/SORT		2,285 kBq		
MINIMUM/SORT		2.1 kBq		
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTIVITY	13,538 kBq	6,446 kBq	
	IMATE) ACTIVITY	1530 kBq	21 kBq	
MAXIMUM/SORT		0 Bq	-8 kBq	
MINIMUM/SORT SPECIFIC ACTIVITY		1,354 Bq/kg	74 Bq/ks	1
SPECIFIC ACTIVITY		Man ad us		
WORK HISTORY				
WORK DAY START	05:57 AM	WORK DAY END	05:30 PM	
PLANT START-UP	05:57 AM	PLANT SHUT-DOWN .	05:30 PM	
START SOIL PROCESSING	06:26 AM	END SOIL PROCESSING		
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr	
WORK HOURS		11.5 hr		
AVAILABLE HOURS		11.5 hr		•
	S (total 20-sec records)	10.08 hr		
DOWN-TIME		1.47 hr		
TOTAL SYSTEM PAUSE		0.88 hr		
NONAVAILABLE HOURS		0.0 hr		•
START-UP		0.49 hr		
SHUT-DOWN		0.47 hr		
PLANT PERFORMANCE		87.3%		
PRODUCTIVITY		87.3%		
TOTAL SOIL PROCESSING RECORDS (2-SE	C and 20-SEC)	2,789		
NONPROCESS RECORDS (Test, calibration		24		
20-SEC PROCESS RECORDS	on, etc,	1,814		
TOTAL SORT		173 MD>0 & MND=0		
NO SORT		1,145 AD=0 & MD=0	& MND>0	•
SOME SORT		496 AD>0&0 <md<mni< td=""><td></td><td></td></md<mni<>		
UNEXPLAINED RECORDS		0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	2		UNEXPLAIN	PAUSE
AD=0 & 1			TIME	TIME
AD<0 & 1			10:35:38	05:57
ACT_P <5 kBq	331 33.9%		16:04:18	06:31

18,140

2-	SEC COUNT	PER100S				18, 140					
		SEC RECORD					(ACT_P	>0 k8q)			
	2-	SEC RECORD	S WITH PO	OSITIVES	IN >1 DE	TECTOR					
		2	DETECTOR	≀S	204		75.6%				
		3	DETECTOR	₹S	53		19.6%				
		4	DETECTOR	RS	10		3.7%				
		5	DETECTOR	₹S	3		1.1%				
		6	DETECTO	RS	0		0.0%				
		7	DETECTOR	RS	0		0.0%				
		8	DETECTO	₹S	0		0.0%				
			DTAL			270					
	NE	T 2-SEC RE	CORDS WIT	TH SORTS		705					
		SEC PERIOD				17,435					
	AV	G TIME BET	WEEN 2-SI	EC SORTS		51.5	sec				
1-GATE S	note	487	ACT_ND	NUMBER	SPEC_A		,	CT_P .	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)		(Bq/kg)			(Bq)	(#)		(kBq)
		4 /4/	4/000	2	-261			4000	161	16.5%	4
1	7	1.4%	-14000	1	-224			8000	406	41.6%	8
2	30	6.2%	-12000	5	-187			2000	123		12
. 3	67	13.8%	-10000	5	-149			16000	70		16
4	88	18.1%	-8000	18				20000	44		20
5	123	25.3%	-6000 -4000	50				24000	23		24
6	76 70	15.6%	-2000	138				28000	26		28
7	78	16.0%	-2000	397				32000	19		32
8	18	3.7%	2000	305				36000	19	1.9%	36
TOTAL	487		4000	257				0000	9	0.9%	40
2 2475 0	2070	488	6000	196				44000	3	0.3%	44
2-GATE S	SORTS	FREQ%	8000	128				48000	8	0.8%	48
DETECTR 8	30K13	LVERW	10000	85			:	52000	7	0.7%	52
9	11	2.3%	12000	60			!	56000	5	0.5%	56
10	54	11.1%	14000	46				50000	7	0.7%	60
11	70	14.3%	16000	58				54000	6	0.6%	64
12	107	21.9%	18000	46				58000	7	0.7%	68
13	117	24.0%	20000	33				72000	2	0.2%	72
14	80	16.4%	22000	8			•	76000	2	0.2%	76
15	49	10.0%	24000	0			;	80000	0	0.0%	80
TOTAL	488		26000	0			;	84000	0	0.0%	84
IOIAL	<del></del>		>28000	0			>	84000	28	2.9%	>84
			TOTAL	1838			•	TOTAL	975		
SUMMARY	TOTALS		*****								
	OT PARTIC	LE EVENTS	969		SORTS BY	Y ONE G	ATE ONL	Y	487	,	-
		CL CVENTS	1052		SORTS RY	Y TWO G	ATES		488	}	

#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

2.00 Empty belt

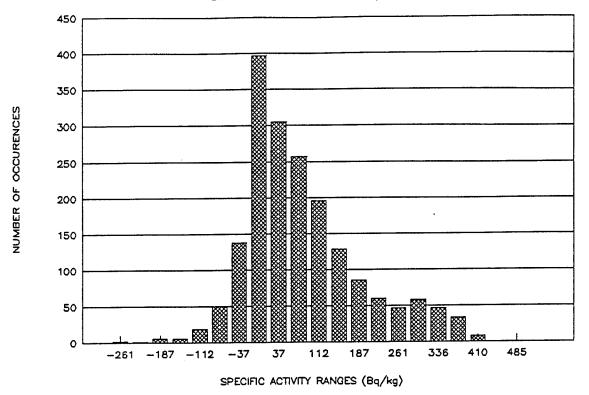
2-SEC COUNT PERIODS

3.00 Test (No process soil)

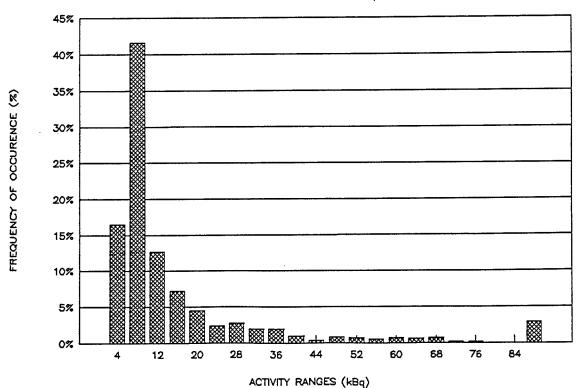
MULTIPARTICLE EVENTS 1052 DISTRIBUTED EVENTS 12900

SORTS BY TWO GATES

SORTER 1 LOG DATA FOR 13-Apr-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 13-Apr-93



SORTER 2 13-Apr-93				
AVERAGE BACKGROUND COUNT RATE	0.77 ± 0.	.05 c/sec		
SORTER SOIL DENSITY	1.15 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³		G. 5411	
		CONTAMINATED	CLEAN	
MASS TOTAL		15.95 tons	80.4 tons	
MAXIMUM/SORT		56.2 kg	53.6 kg 46.9 kg	
MINIMUM/SORT		0.7 kg	40.7 kg	
				83.4%
WEIGHT RECOVERY OR VOLUME RECOVERY	•	12.64 yd³	63.7 yd <sup>3</sup>	76.3 yd3/day
EQUIVALENT SOIL-IN-GROUND		12.04 yu	, , , , , , , , , , , , , , , , , , ,	•
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	t)	25,099 kBq		
TOTAL		959 kBq		
MAXIMUM/SORT		2.3 kBq		
MINIMUM/SORT		•		
DISPERSED + PARTICLE (REALISTIC ES	STIMATEL ACTIVITY	21,422 kBq	6,568 kBq	
	STIMILY NOTITIES	771 kBq	20 kBq	
MAXIMUM/SORT		0 Bq	-12 kBq	
MINIMUM/SORT SPECIFIC ACTIVITY		1,343 Bq/kg	82 Bq/k	9
SPECIFIC ACTIVITY		•		
WORK HISTORY			05 70 04	
WORK DAY START	05:57 AM	WORK DAY END	05:30 PM	
PLANT START-UP	05:57 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:25 AM	END SOIL PROCESSING	05:01 PM 0.0 hr	
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 111	
		11.5 hr		
WORK HOURS		11.5 hr		
AVAILABLE HOURS		9.98 hr		
	URS (total 20-sec records)	1.57 hr		
DOWN-TIME	-	1.00 hr		
TOTAL SYSTEM PAUS		0.0 hr		
NONAVAILABLE HOUR	S	0.48 hr		
START-UP		0.47 hr		
SHUT-DOWN		86.4%		
PLANT PERFORMANCE PRODUCTIVITY		86.4%		
***************************************				
TOTAL SOIL PROCESSING RECORDS (2-	SEC and 20-SEC)	3,076		
NONPROCESS RECORDS (Test, calibra		21		
20-SEC PROCESS RECORDS		1,797		
TOTAL SORT		279 MD>0 & MND=0		
NO SORT		882 AD=0 & MD=0 636 AD>0&0 <md<mn< td=""><td></td><td>(</td></md<mn<>		(
SOME SORT	•			•
UNEXPLAINED RECOR	_	0	UNEXPLAIN	PAUSE
0 <ad<1kbq_& md="">0</ad<1kbq_&>	2		TIME	TIME
AD=0 &			09:13:39	05:57
AD<0 &			10:05:19	06:31
ACT_P <5 kBq	389 30.4%			

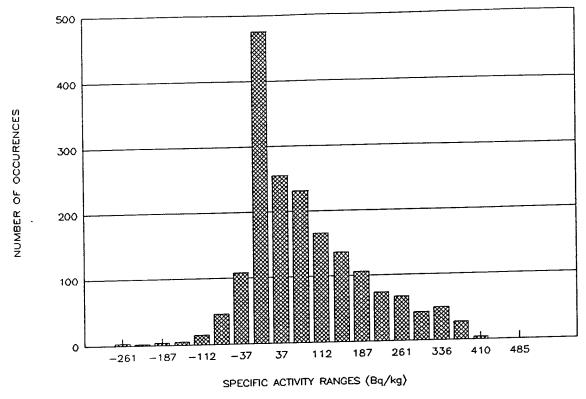
2	2-SEC CO	UNT PERIODS				17,970					
		2-SEC RECORD	S WITH S	ORTS		1,279	(ACT_P >	0 kBq)			
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR			•		
			DETECTO		301		78.0%				
			DETECTO		71		18.4%				
			DETECTO		13		3.4%				
			DETECTO		1		0.3%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
•			DETECTO		0		0.0%				
		Т	OTAL			386					
		NET 2-SEC RE	CORDS WI	TH SORTS	•	893					
		2-SEC PERIOD	S WITH N	O SORTS		17,077					
		AVG TIME BET				40.2	sec				
1-GATE	SORTS	654	ACT_ND	NUMBER	SPEC_A		AC	T_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(	Bq)	(#)		(kBq)
											_
1	25	3.8%	-14000	3				000		14.2%	4
2	<b>8</b> 6	13.1%	-12000	2				000		42.2%	8
3	126	19.3%	-10000	4	-187			2000	190	14.9%	12
4	132	20.2%	-8000	5				000	80	6.3%	16
<sub>.</sub> 5	114		-6000	15	-112			000	62	4.8%	20
. 6	95	14.5%	-4000	46	-75			000	38	3.0%	24
7 -	63	9.6%	-2000	108	-37			8000	25	2.0%	28
8	13	2.0%	0	476	0			2000	18	1.4%	32
TOTAL	654		2000	255	37			000	13	1.0%	36
			4000	231	75			1000	15	1.2%	40
2-GATE	SORTS	625	6000	166	112			000	21	1.6%	44
DETECTR	SORTS	FREQ%	8000	136	149			3000	10	0.8%	48
8			10000	106	187			2000	5	0.4%	52 54
9	43		12000	74	224			0000	8	0.6%	56 60
10	100		14000	67				0000	8	0.6%	60 47
11	133		16000	43				000	7	0.5%	64 49
12	130		18000	50				8000	3	0.2%	68 73
13	101		20000	27				2000	4	0.3%	72 74
14	85		22000	4	410			0000	5	0.4%	76 80
15	33			0				0000	0		
TOTAL	625		26000	0				000	3		84
			>28000	0				000	42	3.3%	>84
			TOTAL	1818			TC	TAL	1279		
SUMMARY							TE 641 11		251		
		ICLE EVENTS	1242		SORTS BY				654		
		TICLE EVENTS	2093		SORTS BY	I WO GA	1152		625		
ξ	DISTRIBU	TED EVENTS	20466								

#### REC CODE EXPLANATION

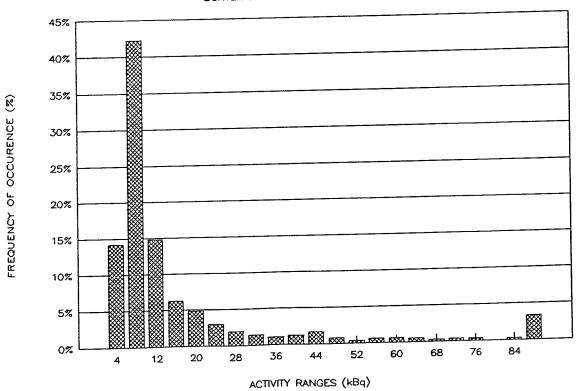
- 1.00 Source check (Soil on belt)
  - 2.00 Empty belt
  - 3.00 Test (No process soil)

12:46

SORTER 2 LOG DATA FOR 13-Apr-93



JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 13-Apr-93



A-178

									·
SORTER 1 12-Apr-93									
AVERAGE BACKGROUND COUNT RATE		0.75	±	0.05	c/sec				
SORTER SOIL DENSITY		1.3	tons/m	13					
GROUND SOIL DENSITY		1.65	tons/m	13					
					CONTAMIN	IATED	CLEAN		
MASS TOTAL					9.01 t			tons	
MAXIMUM/SORT					63.6 k	-	60.5		
MINIMUM/SORT					0.8 k	g	51.5	kg	
WEIGHT RECOVERY OR VOLUME RECOVE	RY								88.8%
EQUIVALENT SOIL-IN-GROUND					7.14 y	⁄d³	56.5	Aq <sub>2</sub>	63.7 yd³/day
PARTICLE ACTIVITY (MAXIMUM ESTIM	ATE)								
TOTAL	-				27,283 k	:Bq			
MAXIMUM/SORT					2,368 k	:Bq			
MINIMUM/SORT					2.0 k	:Bq			
• •									
DISPERSED + PARTICLE (REALISTIC	ESTIMATE) ACTI	VITY			14,855 k	:Bq	7,452	•	
MAXIMUM/SORT					1921 k	•		kBq	
MINIMUM/SORT					0 B	•		kBq	
SPECIFIC ACTIVITY					1,649 B	lq/kg	104	Bq/kg	
WORK HISTORY									
WORK DAY START	05:59 AM				WORK DAY	END	05:30 PM		
PLANT START-UP	05:59 AM				PLANT SH	IUT-DOWN	05:30 PM		
START SOIL PROCESSING	06:28 AM				END SOIL	PROCESSING	03:21 PM		
LUNCH START	11:30 AM				LUNCH PE	RIOD	0.0	hr	
WORK HOURS						11.5 hr			
AVAILABLE HOURS		••				11.5 hr			
ACTUAL PROCESS H	OURS (total 20	-sec re	ecords)			7.37 hr			
DOWN-TIME						4.14 hr			
TOTAL SYSTEM PAU	SE					2.00 hr			
NONAVAILABLE HOU	RS					0.0 hr			
START-UP						0.49 hr			
SHUT-DOWN						2.15 hr			
PLANT PERFORMANCE	E					64.0%			
PRODUCTIVITY						64.0%			
TOTAL SOIL PROCESSING RECORDS (2	-SEC and 20-SE	C)				2,387			
NONPROCESS RECORDS (Test, calibra						7			
20-SEC PROCESS RECORDS					1,327				
TOTAL SORT	•				132 M	0=0M & 0<0			
NO SORT					644 A	D=0 & MD=0 &	MND>0		
SOME SORT					551 A	D>0&0<0M>0M0	max&MND <m< td=""><td>NDmax</td><td></td></m<>	NDmax	
UNEXPLAINED RECO	RDS				0				
0 <ad<1kbq &="" md="">0</ad<1kbq>	. 0						UNEXPLAI	N I	PAUSE
AD=0 8	& MD 0						TIME		TIME
AD<0 8	6 MD 0						08:34:05		06:00
ACT_P <5 kBq	355	33.5	ζ .						07:41

2	SEC COUNT	DED I ONS			1	3,270						08:27
2-		SEC RECORDS	S UTTH SO	DRTS				>0 kBq)				08:32
	2-4	SEC RECORDS	S WITH PO	SITIVES		-						13:27
	2		DETECTOR		244		80.3%					
			DETECTOR		50		16.4%					
			DETECTOR		10		3.3%					
			DETECTOR		0		0.0%					
			DETECTOR		0		0.0%					
			DETECTOR		0		0.0%					
			DETECTOR		0		0.0%					
			OTAL			304						
	NE.	7 2-SEC RE		TH SORTS		756	•					
		SEC PERIOD			1	2,514						
		G TIME BET				35.1	sec					
	•••	_ ,										
1-GATE SO	ORTS	553	ACT_ND	NUMBER	SPEC_A			ACT_P		FREQ%	ACT_P	
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)	
DC (CO )	-											
1	12	2.2%	-14000	2	-231			4000	184	17.4%	4	
2	29	5.2%	-12000	2	-198			8000	432	40.8%	8	
3	83	15.0%	-10000	1	-165			12000	128	12.1%	12	
4	100.	18.1%	-8000	1	-132			16000	88	8.3%	16	
5	126	22.8%	-6000	6	-99			20000	44	4.2%	20	
6	86	15.6%	-4000	19	-66			24000	29	2.7%	24	
7	<b>8</b> 6	15.6%	-2000	55	-33			28000	24	2.3%	28	
8	31	5.6%	0	246	0			32000	17	1.6%	32 36	
TOTAL	553		2000	162	33			36000	9	0.8%	40	
			4000	153	66			40000	6	0.6%	44	
2-GATE S	ORTS	507	6000	144	99			44000	6	0.6% 0.8%	48	
DETECTR	SORTS	FREQ%	8000	136	132			48000	8	0.8%	52	
8			10000	84	165			52000	8 7	0.7%	56	
9	19	3.7%	12000	82				56000	6	0.6%	60	
10	53	10.5%	14000	66				60000	7	0.7%	64	
11	86	17.0%	16000	52				64000	2	0.2%	68	
12	<del>9</del> 6	18.9%	18000	51				68000 72000	3	0.3%	72	
13	106	20.9%	20000	42					6	0.6%	76	
14	82	16.2%	22000	30				76000 80000	4		80	
15	65	12.8%	24000	0				84000	5		84	
TOTAL	507		26000	0				>84000	37		>84	
			>28000	177/	=			TOTAL	1060			
			TOTAL	1334								
SUMMARY			1057		SORTS BY	ONE	GATE ON	ILY	553			
	OT PARTIC		1053 855		SORTS BY				507			
	ULTIPARTIC		9989		301110 01							
Đ	ISTRIBUTE	) EAEWI2	7707									

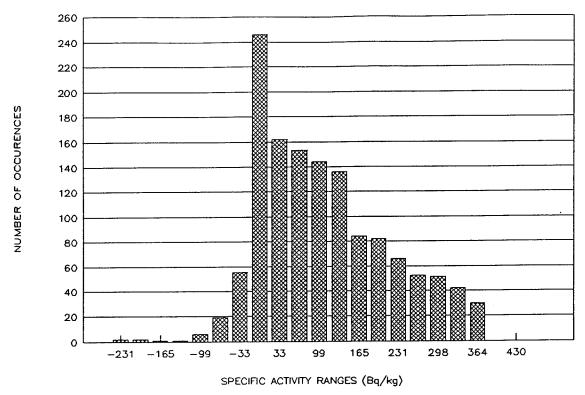
#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

2.00 Empty belt

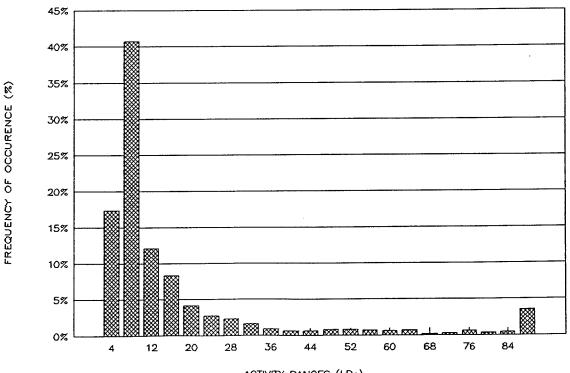
3.00 Test (No process soil)

SORTER 1 LOG DATA FOR 12-Apr-93



### JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 12-Apr-93



ACTIVITY RANGES (kBq)

SORTER 2 12-Apr-93				
SORTER 2 12 Mp. 75				
AVERAGE BACKGROUND COUNT RATE	<b>0.00</b> , -	03 c/sec		
SORTER SOIL DENSITY	1.3 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m <sup>3</sup>	CONTAMINATED	CLEAN	
		16.00 tons	64.1 tons	
MASS TOTAL		63.6 kg	60.5 kg	
MAXIMUM/SORT		0.8 kg	53 kg	
MINIMUM/SORT		V.0 Kg		
				80.0%
WEIGHT RECOVERY OR VOLUME RECOVERY		12.68 yd³	50.8 yd³	63.5 yd3/day
EQUIVALENT SOIL-IN-GROUND		•		
ANALYSM ECTIMAT	E)			
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	E)	21,270 kBq		
TOTAL .		603 kBq		
MAXIMUM/SORT		2.2 kBq		
MINIMUM/SORT				
DISPERSED + PARTICLE (REALISTIC ES	TIMATE) ACTIVITY	18,718 kBq	6,571 kBq	
		452 kBq	21 kBq	
MAXIMUM/SORT MINIMUM/SORT		0 Bq	-11 kBq	
SPECIFIC ACTIVITY		1,170 Bq/kg	102 Bq/kg	I
SPECIFIC ACTIVITY				
WORK HISTORY			05 - 70 PM	
WORK DAY START	05:59 AM	WORK DAY END	05:30 PM	
PLANT START-UP	05:59 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	05:59 AM	END SOIL PROCESSING	0.0 hr	
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 111	
		11.5 hr		
WORK HOURS		11.5 hr		
AVAILABLE HOURS		7.36 hr		
	URS (total 20-sec records)	4.16 hr		
DOWN-TIME	_	2.02 hr		
TOTAL SYSTEM PAUS		0.0 hr		
NONAVAILABLE HOUR	S	0.00 hr		
START-UP		2.14 hr		
SHUT-DOWN		63.9%		
PLANT PERFORMANCE	•	63.9%		
PRODUCTIVITY	•			
TOTAL SOIL PROCESSING RECORDS (2-	SEC and 20-SEC)	2,665		
NONPROCESS RECORDS (Test, calibra	tion. etc)	· 10		
20-SEC PROCESS RECORDS		1,324		
TOTAL SORT		247 MD>0 & MND=0		
NO SORT		530 AD=0 & MD=0	& MND>0	
SOME SORT		547 AD>0&0 <md<mn< td=""><td>Dmax&amp;MND<mndmax< td=""><td></td></mndmax<></td></md<mn<>	Dmax&MND <mndmax< td=""><td></td></mndmax<>	
UNEXPLAINED RECOR	DS	0		DALICE
0 <ad<1kbq &="" md="">0</ad<1kbq>	1		UNEXPLAIN	PAUSE
AD=0 8	, MD 2		TIME	TIME 05:59
AD<0 8			07:08:24	06:00
ACT_P <5 kBq	392 29.2%	·	08:32:14	00.00
- ·				

13,240

14:10:15

07:41

	Z SEC CO	ONI PERIODS				13,240	,				14.10.13	07.41
		2-SEC RECOR	S WITH S	ORTS		1,341	(ACT_P	>0 kBq)				08:26
		2-SEC RECOR	S WITH P	OSITIVES	IN >1 D	ETECTOR	<b>t</b>					08:27
		;	2 DETECTO	RS	288		81.6%					13:27
		3	3 DETECTO	RS	56		15.9%					14:10
		4	DETECTO	RS	8		2.3%					
		9	DETECTO	RS	1		0.3%					
		•	DETECTO	RS	0		0.0%					
		7	7 DETECTO	RS	0		0.0%					
		8	B DETECTO	RS	0		0.0%					
		1	TOTAL			353	i					
	*	NET 2-SEC RE	CORDS WI	TH SORTS		988	;					
		2-SEC PERIOD	S WITH N	O SORTS		12,252	!					
		AVG TIME BET	WEEN 2-S	EC SORTS		26.8	sec					
1-GAT	E SORTS	711	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQX	ACT_P	
DETEC			(Bq)		(Bq/kg)			(Bq)	(#)		(kBq)	
	1 25	3.5%	-14000	4	-231			4000	177	13.2%	4	
;	2 89	12.5%	-12000	1	-198			8000	570	42.5%	8	
:	3 128	18.0%	-10000	2	-165		•	12000	207	15.4%	12	
4	4 145	20.4%	-8000	3	-132		•	16000	113	8.4%	16	
!	5 128	18.0%	-6000	12	-99		;	20000	63	4.7%	20	
	5 107	15.0%	-4000	23	-66		;	24000	41	3.1%	24	
7	7 75	10.5%	-2000	41	-33		;	28000	34	2.5%	28	
	3 14	2.0%	0	338	0		:	32000	15	1.1%	32	
TOTAL	- 711		2000	135	33		3	36000	13	1.0%	36	
			4000	139	66		4	40000	13	1.0%	40	
2-GATE	SORTS	630	6000	150	99		4	44000	13	1.0%	44	
DETECT	TR SORTS	FREQ%	8000	132	132		4	48000	10	0.7%	48	
8	3		10000	81	165		5	52000	9	0.7%	52	
9	42	6.7%	12000	64	198		5	56000	5	0.4%	56	
10	90	14.3%	14000	63	231		•	50000	11	0.8%	60	
11	121	19.2%	16000	50	264		•	54000	3	0.2%	64	
12	129	20.5%	18000	35	298		•	58000	4	0.3%	68	
13	115	18.3%	20000	40	331		. 7	72000	2	0.1%	72	
14	91	14.4%	22000	21	364		7	76000	3	0.2%	76	
15	42	6.7%	24000	0	397		8	30000	1	0.1%	80	
TOTAL	630		26000	0	430		8	34000	2	0.1%	84	
			>28000	0	0		>8	34000	32	2.4%	>84	
			TOTAL	1334			1	TOTAL	1341			
SUMMAR	Y TOTALS											
	HOT PARTI	CLE EVENTS	1300		SORTS BY	ONE G	ATE ONLY	•	711			
	MULTIPART	ICLE EVENTS	1487		SORTS BY	TWO GA	ATES		630			
	DISTRIBUT	ED EVENTS	18354									

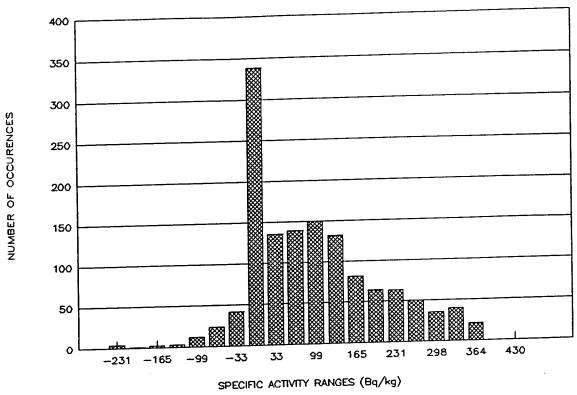
#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt

2-SEC COUNT PERIODS

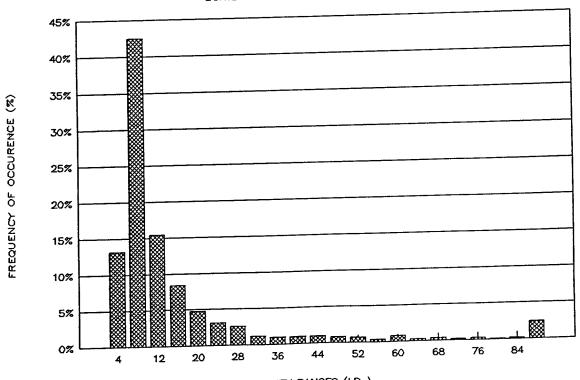
3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 12-Apr-93



# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 12-Apr-93



ACTIVITY RANGES (kBq)

		. 7/			
AVERAGE BACKGROUND COUNT RATE			c/sec		
SORTER SOIL DENSITY		1.3 tons/m <sup>3</sup>			
GROUND SOIL DENSITY		1.65 tons/m³	CONTAMINATED	CLEAN	
MASS TOTAL			1.20 tons	105.9 tons	•
MAXIMUM/SORT			14.4 kg	60.5 kg	•
MINIMUM/SORT			0.8 kg	46.2 kg	
	(EDV				00.04
WEIGHT RECOVERY OR VOLUME RECO\ EQUIVALENT SOIL-IN-GROUND	VERT		0.95 yd³	84.0 yd3	98.9% 84.9 yd³/day
			,,,	0.0,0 /4	0.07 / 4 / 44
PARTICLE ACTIVITY (MAXIMUM EST	IMATE)				
TOTAL			41,187 kBq		•
MAXIMUM/SORT			8,862 kBq		
MINIMUM/SORT			2.4 kBq		
DISPERSED + PARTICLE (REALISTIC	ESTIMATE) ACTIVI	ΤΥ	23,363 kBq	6,851 kBq	
MAXIMUM/SORT			16078 kBq	17 kBq	
MINIMUM/SORT			0 Bq	-7 kBq	
SPECIFIC ACTIVITY			19,460 Bq/kg	65 Bq/k	(g
WORK HISTORY					
WORK DAY START	06:06 AM		WORK DAY END	05:30 PM	
PLANT START-UP	06:06 AM		PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:33 AM		END SOIL PROCESSING	04:53 PM	
LUNCH START	11:30 AM		LUNCH PERIOD	0.0 hr	
WORK HOURS			11.4 hr		
AVAILABLE HOURS	<b>;</b>		11.4 hr		
ACTUAL PROCESS	HOURS (total 20-s	ec records)	9.83 hr		
DOWN-TIME			1.57 hr		
TOTAL SYSTEM PA	USE		0.87 hr		
NONAVAILABLE HO	URS		0.0 hr		
START-UP			0.46 hr		
SHUT-DOWN			0.62 hr		
PLANT PERFORMAN	ICE		86.3%		
PRODUCTIVITY			86.3%		
OTAL SOIL PROCESSING RECORDS (	2-SEC and 20-SEC)		2,861		
NONPROCESS RECORDS (Test, calib			22		
20-SEC PROCESS RECORDS	•		1,770		
TOTAL SORT			0 MD>0 & MND=0		
NO SORT			1,066 AD=0 & MD=0 &	MND>0	
SOME SORT			704 AD>0&0 <md<mnd< td=""><td>max&amp;MND⊲MNDmax</td><td></td></md<mnd<>	max&MND⊲MNDmax	
UNEXPLAINED REC	ORDS		0		
0 <ad<1kbq &="" md=""></ad<1kbq>	0 1			UNEXPLAIN	PAUSE
AD=0	8 MD 0			TIME	TIME
AD<0	& MD 0			09:39:42	06:06
ACT D JE LO-	770	70 74			07.40

07:40

ACT\_P <5 kBq

330 30.2%

	2-SEC CO	UNT PERIODS				17,700					08:02
		2-SEC RECORD	S WITH S	ORTS		1,091	(ACT_P >0	kBq)			
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR					
			DETECTO		235		84.8%				
		3	DETECTO	RS	37		13.4%				
		. 4	DETECTO	RS	5		1.8%				
		5	DETECTO	RS	0		0.0%				
		. 6	DETECTO	RS	0		0.0%				
		7	DETECTO	RS	0		0.0%				
		8	DETECTO	RS	0		0.0%				
		Т	OTAL			277					
		NET 2-SEC RE	CORDS WI	TH SORTS		814					
		2-SEC PERIOD	S WITH N	O SORTS		16,886					
		AVG TIME BET	WEEN 2-S	EC SORTS		43.5	sec				
			407 40	NI MOTO	CDEC A		ACT_	P SORT	FREQ%	ACT_P	
1-GATE		557	ACT_ND		SPEC_A		(Bo	•		(kBq)	
DETECT	R SORTS	FREQ%	(pg)	(#)	(Bq/kg)		(00	1/ \"/		· 7*	
1	10	1.8%	-14000	2	-231		400	0 140	12.8%	4	
2			-12000	4	-198		800		43.1%	8	
3			-10000	5	-165		1200		14.6%	12	
4			-8000	3	-132		1600		7.9%	16	
5			-6000	5	-99		2000	00 41	3.8%	20	
6			-4000	9	-66		2400	00 49	4.5%	24	
7			-2000	63	-33		2800	00 35	3.2%	28	
8			0	139	0		3200	00 17	1.6%	32	
TOTAL	557		2000	339	33		3600	00 7	0.6%	36	
			4000	409	66		4000	00 10	0.9%	40	
2-GATE	SORTS	534	6000	351	99		4400	8 00		44	
DETECT		FREQ%	8000	239	132		4800	00 11	1.0%	48	
8			10000	133	165		5200	00 5	0.5%	52	
9	19	3.6%	12000	62	198		5600		0.4%	56	
10	53	9.9%	14000	20	231		6000		0.5%	60	
11	105	19.7%	16000	7	264		6400		0.5%	64	
12	101	18.9%	18000	2	298		6800			68	
13	112		20000	0			7200			72 74	
14	82	15.4%	22000	0	364		7600		0.3%	76	
15	62	11.6%	24000	. 0			8000			80	
TOTAL	534		26000	0	430		8400			84	
			>28000	0			>8400		2.7%	>84	
			TOTAL	1792			TOTA	AL 1091			
SUMMAR	Y TOTALS							66.4			
		ICLE EVENTS	1076				ATE ONLY	557 57/			
		TICLE EVENTS	496		SORTS BY	TWO G	AIES	534			
	DISTRIBU	TED EVENTS	0								

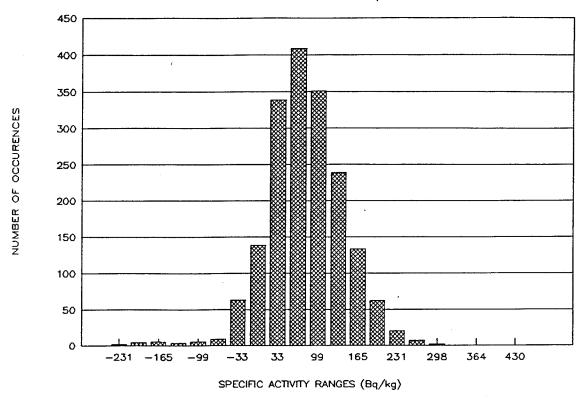
#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

2.00 Empty belt

3.00 Test (No process soil)

SORTER 1 LOG DATA FOR 10-Apr-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 10-Apr-93

45% 40% 35% FREQUENCY OF OCCURENCE (%) 30% 25% 20% 15% 10% 5% 0% 12 20 28 36 60 68 76 84 ACTIVITY RANGES (kBq)

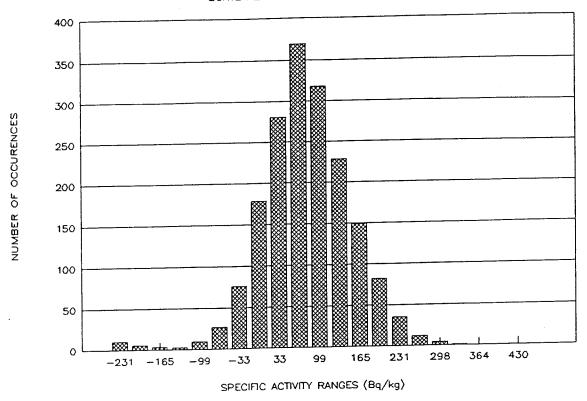
SORTER 2	10-Apr-93									
AUTRACT DACUCROUM	IN COUNT DATE		0.79	± 0.03	c/sec					
AVERAGE BACKGROUN				tons/m³						
SORTER SOIL DENS!				tons/m³						
GROUND SOIL DENS!	111		1.05	20110,	CONTAM	INATED	CLEAN			
						tons	105.3	tons		
MASS TOTAL	NO.7				63.6		60.5	kg		
MAXIMUM/SO					0.8	=	54.5			
MINIMUM/SC	жі					_				
HEIGHT BECOVERY	OR VOLUME RECOVERY	•							98.8%	
EQUIVALENT SOIL-					1.05	Aq <sub>3</sub>	83.4	yd3	84.5 yd3/	day
Editaveru 2015	in dicono									
PARTICLE ACTIVITY	(MAXIMUM ESTIMATE	)								
TOTAL					21,514	kBq				
MAXIMUM/SO	ORT				1,650	kBq				
MINIMUM/SO					2.7	kBq				
DISPERSED + PART	ICLE (REALISTIC EST	IMATE) ACTIV	'ITY		9,783	kBq	6,926	-		
MAXIMUM/S					1341	kBq		kBq		
MINIMUM/S					0	Bq		kBq		
SPECIFIC A					7,389	Bq/kg	66	Bq/kg		
<u> </u>										
WORK HISTORY										
WORK DAY	START	06:06 AM			WORK D		05:30 PM			
PLANT STA	RT-UP	06:06 AM				SHUT-DOWN	05:30 PM			
START SOI	L PROCESSING	06:33 AM				•=	04:54 PM	<b>L</b> _		
LUNCH STA	RT	11:30 AM			LUNCH	PER I OO	0.0	nr		
						11.4 hr				
	WORK HOURS					11.4 hr				
	AVAILABLE HOURS	- 4		ada)		9.78 hr				
	ACTUAL PROCESS HOUR	S (total 20-	sec r	ecorus		1.62 hr				
	DOWN-TIME					0.91 hr				
	TOTAL SYSTEM PAUSE					0.0 hr				
	NONAVAILABLE HOURS					0.45 hr				
	START-UP					0.59 hr				
	SHUT-DOWN					85.8%				
	PLANT PERFORMANCE					85.8%				
I	PRODUCTIVITY					<b></b>				
	SSING RECORDS (2-SE	C and 20-SE	- )			2,877				
	SSING RECORDS (2°52 DS (Test, calibrati		-,			26				
	OCESS RECORDS	on, etc,			1,761					
	TOTAL SORT				-	MD>0 & MND=0				
	NO SORT				1,010	AD=0 & MD=0 &	MND>0			
	SOME SORT					AD>0&0 <md< td=""><td></td><td>NDmax</td><td></td><td></td></md<>		NDmax		
	SOME SORT UNEXPLAINED RECORDS				0					
	O-AD-1kBq & MD>0	2					UNEXPLAT	N i	PAUSE	
	M & 0=0A	_					TIME		TIME	
	AD<0 & H	-					12:23:26	,	06:06	
	ACT_P <5 kBq	320	28.7	7%			13:10:26	,	07:40	
	VOITE A KON	220								

	2-SEC COL	JNT PERIODS				17,610	)					08:02
		2-SEC RECORD	S WITH S	ORTS		-	(ACT_P	>0 kBq	)			11:58
		2-SEC RECORD			IN >1 D		_	•				
			2 DETECTO		225		79.2%					
			DETECTO		46		16.2%					
			DETECTO		10		3.5%					
			DETECTO		3		1.1%					
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
			TOTAL			284						
		NET 2-SEC RE		TH SORTS		832						
		2-SEC PERIOD				16,778						
		AVG TIME BET				42.3						
		,										
1-GATE	SORTS	587	ACT_ND	NUMBER	SPEC_A		A	CT_P	SORT	FREQ%	ACT_P	
DETECT	R SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)	
	47	2 /*	1/000	10	-231			4000	151	13.5%	4	
1			-14000	10 5	-198			8000		40.8%	8	
2		14.5%	-12000	3	-165			2000		15.4%	12	
3		12.9%	-10000	2	-132			6000	89	8.0%	16	
4		22.0%	-8000	9	-132			0000	56	5.0%	20	
5		22.1% 16.0%	-6000 -4000	26	-66			4000	30	2.7%	24	
6 7		8.7%	-2000	76	-33			8000	27	2.4%	28	
8		1.4%	-2000	178	0			2000	15	1.3%	32	
TOTAL		1.44	2000	280	33			6000	11	1.0%	36	
TOTAL	101		4000	369	66			0000	14	1.3%	40	
2-GATE	SUBTS	529	6000	318	99			4000	11	1.0%	44	
DETECT		FREQ%	8000	228	132			8000	8	0.7%	48	
8		INCLA	10000	149	165			2000	7	0.6%	52	
9		8.3%	12000	82	198			6000	5	0.4%	56	
10		11.9%	14000	35	231			0000	7	0.6%	60	
11		16.8%	16000	12	264			4000	7	0.6%	64	
12		24.8%	18000	4	298			8000	5	0.4%	68	
13		18.9%	20000	1	331		7	2000	6	0.5%	72	
14	78	14.7%	22000	0	364		7	6000	3	0.3%	76	
15	24	4.5%	24000	0	397			0000	0	0.0%	80	
TOTAL	529		26000	0	430			4000	2	0.2%	84	
			>28000	0	0			4000	<b>3</b> 5	3.1%	>84	
			TOTAL	1787			Ţ	OTAL	1116			
SUMMAR'	Y TOTALS											
		CLE EVENTS	1103		SORTS BY	ONE G	ATE ONLY		587			
		ICLE EVENTS	549		SORTS BY	THO G	ATES		529			
	DISTRIBUT	ED EVENTS	83									

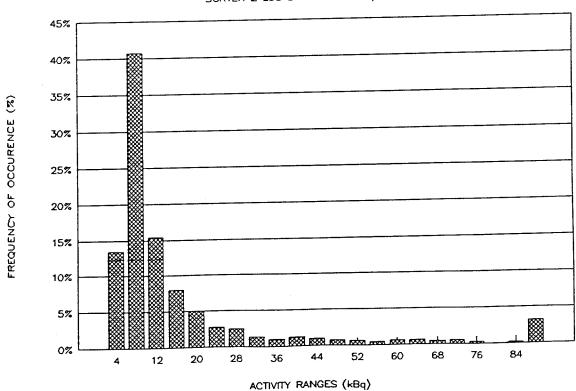
#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 10-Apr-93



JA SOIL CLEANUP PLANT HOT PARTICLES
SORTER 2 LOG DATA FOR 10-APr-93



SORTER 1 08-Apr-93									
AVERAGE BACKGROUND COUNT RATE		0.76	±	0.06	c/sec				
SORTER SOIL DENSITY	•	1.2	tons/m	3	·				
GROUND SOIL DENSITY		1.65	tons/m	3					
					CONTAM	INATED	CLEAN		
MASS TOTAL					1.37	tons	85.4	tons	
MAXIMUM/SORT					58.7	kg	55.9	kg	
MINIMUM/SORT					0.7	kg	49.6	kg	
WEIGHT RECOVERY OR VOLUME RECOVE	RY								98.4%
EQUIVALENT SOIL-IN-GROUND					1.08	yd3	67.7	Aq <sub>2</sub>	68.8 yd <sup>3</sup> /da
PARTICLE ACTIVITY (MAXIMUM ESTIM	ATE)								
TOTAL					15,817	kBq			
MAXIMUM/SORT					869	kBq			
MINIMUM/SORT					2.2	kBq			
DISPERSED + PARTICLE (REALISTIC	ESTIMATE) ACTIVI	TY			6,887	kBq	7,501	•	
MAXIMUM/SORT					609	kBq		kBq	
MINIMUM/SORT					-10376	•		kBq	
SPECIFIC ACTIVITY					5,039	8q/kg	88	Bq/kg	I
WORK HISTORY									
WORK DAY START	06:00 AM					AY END	05:30 PM		
PLANT START-UP	06:00 AM					SHUT-DOWN	05:30 PM		
START SOIL PROCESSING	06:27 AM					IL PROCESSING			
LUNCH START	11:30 AM				LUNCH	PERIOD	0.0	hг	
WORK HOURS						11.5 hr			
AVAILABLE HOURS						11.5 hr			
ACTUAL PROCESS H	OURS (total 20-s	ec re	cords)			8.62 hr			
DOWN-TIME						2.88 hr			
TOTAL SYSTEM PAU						2.41 hr			
NONAVAILABLE HOU	RS					0.0 hr			
START-UP						0.46 hr 0.47 hr			
SHUT-DOWN	-					75.0%			
PLANT PERFORMANCE PRODUCTIVITY	<b>E</b>					75.0%			
TOTAL SOIL PROCESSING RECORDS (2	-SEC and 20-SEC)					2,650			
NONPROCESS RECORDS (Test, calibration)						3			
20-SEC PROCESS RECORDS					1,552				
TOTAL SORT						MD>0 & MND=0			*
NO SORT					823	AD=0 & MD=0 &	C <dam 2<="" td=""><td></td><td></td></dam>		
SOME SORT					725	AD>0&0 <md<mni< td=""><td>max&amp;MND<m< td=""><td>NDmax</td><td></td></m<></td></md<mni<>	max&MND <m< td=""><td>NDmax</td><td></td></m<>	NDmax	
UNEXPLAINED RECO	RDS				0				
0 <ad<1kbq &="" hd="">0</ad<1kbq>							UNEXPLAT	N	PAUSE
AD=0	& MD 0						TIME		TIME
AD<0	& MD 1						15:45:22		06:00
ACT_P <5 kBq	<b>3</b> 63	33.1%							13:36

2.	-sec count	PERIODS			1	15,520						13:52
2		SEC RECORDS	S LITH SO	ORTS				>0 kBq)				
		SEC RECORDS										
	2-		DETECTOR		256		85.3%					
			DETECTOR		37		12.3%					
			DETECTOR		6		2.0%					
			DETECTOR		1		0.3%					
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
			OTAL			300	1					
	NE	T 2-SEC RE		TH SORTS		798	<b>;</b>					
		SEC PERIOD				14,722	:					
		G TIME BET				38.9	sec					
1-GATE S	ORTS	565	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P	
DETECTR	SORTS	FREQ%	(Bq)		(Bq/kg)			(Bq)	(#)		(kBq)	
DETECTION	••••		·									
1	8	1.4%	-14000	0	-250			4000	183	16.7%	4	
2	50	8.8%	-12000	2	-215			8000	447	40.7%	8	
3	88	15.6%	-10000	3	-179			12000	185	16.8%	12	
4	100	17.7%	-8000	4	-143			16000	81	7.4%	16	
5	109	19.3%	-6000	4	-107			20000	54	4.9%	20	
6	105	18.6%	-4000	9	-72			24000	27		24	
7	86	15.2%	-2000	26	-36			28000	19	1.7%	28	
8	19	3.4%	0	102	0			32000	13		32	
TOTAL	565		2000	176	36			36000	13		36	
			4000	342	72			40000	13		40	
2-GATE S	ORTS	533	6000	330	107			44000	5		44	
DETECTR	SORTS	FREQ%	8000	262	143			48000	11		48 53	
8			10000	149				52000	6		52 54	
9	18	3.4%	12000	81	215			56000	4		56	
10	61	11.4%	14000	39	250			60000	3		60 64	
11	87	16.3%	16000	20	286			64000	5		68	
12	98	18.4%	18000	4	322			68000	5		72	
13	113	21.2%	20000	2				72000	2		76	
14	91	17.1%	22000	0	• • •			76000	4		80	
15	65	12.2%	24000	0				80000	0		84	
TOTAL	533		26000	0				84000	0		>84	
			>28000	0			:	>84000	18		704	
			TOTAL	1555				TOTAL	1098			
SUMMARY	TOTALS								E/E			
H	OT PARTIC	LE EVENTS	1096		SORTS BY			LŤ	565			
H	ULT I PART I	CLE EVENTS	532		SORTS BY	TWO	GATES		533			
D	ISTRIBUTE	DEVENTS	323									
REC CODE	EXPLANAT	ION										

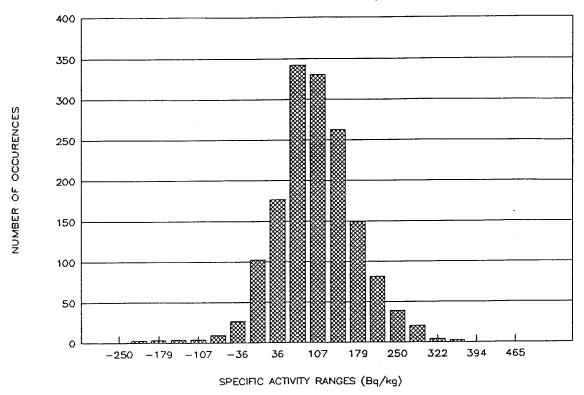
#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

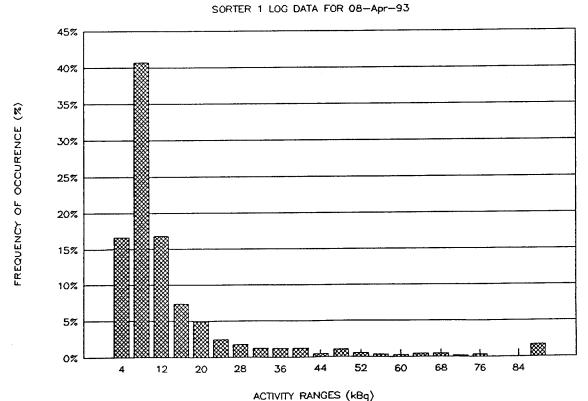
2.00 Empty belt

3.00 Test (No process soil)

SORTER 1 LOG DATA FOR 08-Apr-93



# JA SOIL CLEANUP PLANT HOT PARTICLES



SORTER 2 08-Apr-93			
AVERAGE BACKGROUND COUNT RATE	0.79 ±	0.04 c/sec	
SORTER SOIL DENSITY	1.2 tons/	m³	
GROUND SOIL DENSITY	1.65 tons/	m <sup>3</sup>	
drooms soil sensiti		CONTAMINATED	CLEAN
MASS TOTAL		2.04 tons	84.6 tons
MAXIMUM/SORT		58.7 kg	55.9 kg
MINIMUM/SORT		0.7 kg	49.6 kg
			97.6%
WEIGHT RECOVERY OR VOLUME RECOVE	RY		67.0 yd <sup>3</sup> 68.6 yd <sup>3</sup> /day
EQUIVALENT SOIL-IN-GROUND		1.61 yd <sup>3</sup>	87.0 yd- 88.0 yd 7day
PARTICLE ACTIVITY (MAXIMUM ESTIM	ATE)	16,718 kBq	
TOTAL		702 kBq	
MAXIMUM/SORT		2.6 kBq	
MINIMUM/SORT		Z.U KBY	
0.0000000000000000000000000000000000000	CCTIMATE) ACTIVITY	8,473 kBq	5,974 kBq
DISPERSED + PARTICLE (REALISTIC	COLIMNIC) WOLLATLI	366 kBq	19 kBq
MAXIMUM/SORT		-14666 Bq	-17 kBq
MINIMUM/SORT		4,163 Bq/kg	71 Bq/kg
SPECIFIC ACTIVITY			
WORK HISTORY			
WORK DAY START	06:00 AM	WORK DAY END	05:30 PM
PLANT START-UP	06:00 AM	PLANT SHUT-DOWN	05:30 PM
START SOIL PROCESSING	06:27 AM	END SOIL PROCESSING	
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr
		11.5 hr	
WORK HOURS		11.5 hr	
AVAILABLE HOURS	numa (++++1 20-000 pagarde		
	OURS (total 20-sec records	2.89 hr	
DOWN-TIME	ec.	2.44 hr	
TOTAL SYSTEM PAU		0.0 hr	
NONAVAILABLE HOU	к2	0.46 hr	
START-UP		0.47 hr	
SHUT-DOWN	e.	74.8%	
PLANT PERFORMANC	E	74.8%	
PRODUCTIVITY			
TOTAL SOIL PROCESSING RECORDS (2	-SEC and 20-SEC)	2,661	
NONPROCESS RECORDS (Test, calibr		3	
20-SEC PROCESS RECORDS		1,549	
TOTAL SORT		10 MD>0 & MND=0	
NO SORT		585 AD=0 & MD=0	
SOME SORT		954 AD>0&0 <md<mn< td=""><td>Dmax&amp;MND <mndmax< td=""></mndmax<></td></md<mn<>	Dmax&MND <mndmax< td=""></mndmax<>
UNEXPLAINED RECO	DRDS	0	
0 <ad<1kbq &="" md="">0</ad<1kbq>	) 0		UNEXPLAIN PAUSE
AD=0	& MD 1		TIME TIME
AD<0	& MD 1		13:40:20 06:00
ACT_P <5 kBq	330 29.7%		15:45:22 11:46

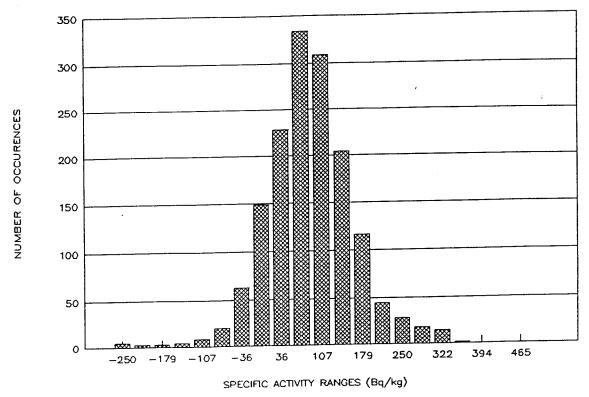
Printed on 05/22/93 at 07:51:30 AM

	2-SEC CO	UNT PERIODS				15,490						13:36
		2-SEC RECORD	S WITH S	ORTS				>0 kBq)				13:52
		2-SEC RECORD			IN >1 DI			•				
			2 DETECTO		229		84.2%					
			DETECTO		36		13.2%					
			DETECTO		6		2.2%					
			DETECTO		1		0.4%					
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
			BETECTO		Ω		0.0%					
			TOTAL		-	272						
		NET 2-SEC RE		TU CODIC		840						
		2-SEC PERIOD				14,650						
		AVG TIME BET				36.9	SAC					
		MAG LIME DE	INCEN 2"3			30.7	300					
1-GATE	SORTS	590	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P	
DETECTI		FREQ%	(Bq)		(Bq/kg)			(Bq)	(#)		(kBq)	
			,									
1	16	2.7%	-14000	5	-250			4000	157	14.1%	4	
2	86	14.6%	-12000	3	-215			8000	469	42.2%	8	
3	100	16.9%	-10000	3	-179			12000	174	15.6%	12	
4	119	20.2%	-8000	4	-143			16000	78	7.0%	16	
5	119	20.2%	-6000	8	-107			20000	54	4.9%	20	
6	95	16.1%	-4000	20	-72		;	24000	39	3.5%	24	
7	48	8.1%	-2000	63	-36		;	28000	24	2.2%	28	
8	7	1.2%	0	149	0		;	32000	17	1.5%	32	
TOTAL	590		2000	228	36		:	36000	15	1.3%	36	
			4000	334	72		•	40000	8	0.7%	40	
2-GATE	SORTS	522	6000	309	107		•	44000	9	0.8%	44	•
DETECT	R SORTS	FREQ%	8000	204	143		•	48000	12	1.1%	48	
8			10000	117	179		!	52000	4	0.4%	52	
9	33	6.3%	12000	44	215		!	56000	8	0.7%	56	
10	82	15.7%	14000	28	250		•	50000	5	0.4%	60	
11	108	20.7%	16000	18	286		•	54000	3	0.3%	64	
12	114	21.8%	18000	14	322		•	58000	7	0.6%	68	
13	96	18.4%	20000	1	358		•	72000	1	0.1%	72	
14	63	12.1%	22000	0	394		•	76000	3	0.3%	76	
15	26	5.0%	24000	0	429		1	80000	1	0.1%	80	
TOTAL	522		26000	0	465		1	84000	4	0.4%	84	
			>28000	0	0		>8	84000	20	1.8%	>84	
			TOTAL	1552			•	TOTAL	1112			
SUMMARY	Y TOTALS											
	HOT PART	ICLE EVENTS	1126		SORTS BY	ONE G	ATE ONL	<b>Y</b>	590			
	MULTIPAR	TICLE EVENTS	990		SORTS BY	TWO G	ATES		522			
	DISTRIBUT	TED EVENTS	790									

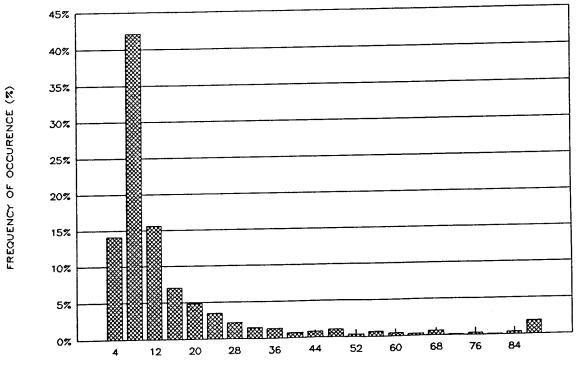
#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 08-Apr-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 08-Apr-93



ACTIVITY RANGES (kBq)

SORTER 1 07-Apr-93								
AVERAGE BACKGROUND COUNT RATE	(	0.77 ±	0.05 c/	sec				
SORTER SOIL DENSITY	•	1.15 tons/	m³					
GROUND SOIL DENSITY	•	1.65 tons/	'm³					
			CC	IMATM	NATED	CLEAN		
MASS TOTAL				1.56	tons	100.3	tons	
MAXIMUM/SORT				56.2	kg	53.6	kg	
MINIMUM/SORT				0.7	kg	45.5	kg	
								98.5%
WEIGHT RECOVERY OR VOLUME RECOVER	(T			1.23	ved3	79.5	Aq2	80.7 yd3/day
EQUIVALENT SOIL-IN-GROUND		*		1.23	,u	17.5	, .	001. ya 7 <b>u</b> ay
PARTICLE ACTIVITY (MAXIMUM ESTIMA	TE)							
TOTAL			18	,848	kBq			
MAXIMUM/SORT				469	kBq			
MINIMUM/SORT				2.2	kBq			
DISPERSED + PARTICLE (REALISTIC E	STIMATE) ACTIVI	TY	8	3,458	kBq	8,106	kBq	
MAXIMUM/SORT	• • • • • • • • •				kBq	19	kBq	
MINIMUM/SORT				0	Bq	-10	kBq	
SPECIFIC ACTIVITY			5	,431	Bq/kg	81	Bq/kg	
3, 23, 13, 70, 17, 17, 17, 17, 17, 17, 17, 17, 17, 17				-				
WORK HISTORY						05 - <b>7</b> 0 pu		
WORK DAY START	06:00 AM				AY END	05:30 PM		
PLANT START-UP	06:00 AM				SHUT-DOWN	05:30 PM		
START SOIL PROCESSING	06:27 AM				IL PROCESSING			
LUNCH START	11:30 AM		L	JNCH F	PERIOD	0.0	nr	
WORK HOURS					11.5 hr			
AVAILABLE HOURS					11.5 hr			
ACTUAL PROCESS HO	OURS (total 20-s	ec records	s)		10.56 hr			
DOWN-TIME					0.94 hr			
TOTAL SYSTEM PAUS	SE				0.47 հո			
NONAVAILABLE HOUF	RS .				0.0 hr			
START-UP					0.46 hr			
SHUT-DOWN					0.47 hr			
PLANT PERFORMANCE					91.8%			
PRODUCTIVITY					91.8%			
TOTAL SOIL PROCESSING RECORDS (2-	SEC and 20-SEC)				3,284			
NONPROCESS RECORDS (Test, calibrate)					2			
20-SEC PROCESS RECORDS	20101, 000,			1,901				
TOTAL SORT				-	MD>0 & MND=0			
NO SORT					AD=0 & MD=0 &	MND>0		
SOME SORT				985	AD>0&0 <md<< td=""><td>max&amp;MND∢M</td><td>NDmax</td><td></td></md<<>	max&MND∢M	NDmax	
UNEXPLAINED RECOR	RDS			0				
0 <ad<1kbq &="" md="">0</ad<1kbq>	4			,		UNEXPLAI	N	PAUSE
AD=0	_					TIME		TIME
AD<0 8						07:31:57	,	06:00
	-	33.8%				08:56:37		12:26
ACT_P <5 kBq	400	JJ.UA						

						19,010				13	3:04:57	13:20
7		IT PERIODS		ND T.C		_	(ACT P	>0 kBq)			:09:41	
	ā	2-SEC RECORDS	2 MIIH 20	KIS MITIUCO	111 \1 NE		(,,,,,	-0 4547				
	7	2-SEC RECORD				IECION	83.1%					
		_	DETECTOR		310		15.5%					
			DETECTOR		58		1.3%					
			DETECTOR		5		0.0%					
			DETECTOR		0		0.0%					
			DETECTOR		0		0.0%					
			DETECTOR		0		0.0%					
			DETECTOR	(5	U	373	0.0%					
			OTAL	ru contc		1,010						
		NET 2-SEC RE				18,000						
		2-SEC PERIOD				37.6	Sec					
	4	AVG TIME BET	MEEN 2-30	EC SUR13		31.0	500					
1-GATE	SORTS	698	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P	
DETECTR		FREQ%	(Bq)		(Bq/kg)			(pg)	(#)		(kBq)	
DETECT	•		•									
1	12	1.7%	-14000	0	-261			4000	226	16.3%	4	
2	54	7.7%	-12000	0	-224			8000	620	44.8%	8	
3	102	14.6%	-10000	1	-187			12000	199	14.4%	12	
4	129	18.5%	-8000	2	-149			16000	80	5.8%	16	
5	156	22.3%	-6000	5	-112			20000	53	3.8%	20	
6	135	19.3%	-4000	16	-75			24000	46	3.3%	24	
7	93	13.3%	-2000	41	-37			28000	31	2.2%	28 32	
8	17	2.4%	0	141	0			32000	14	1.0%	36	
TOTAL	698		2000	300	37			36000	23 11	0.8%	40	
			4000	397	75			40000	7		44	
2-GATE	SORTS	685	6000	438	112			44000 48000	6		48	
DETECTR	SORTS	FREQ%	8000	294	149			52000	3		52	
8			10000	162	187			56000	12		56	
9	29	4.2%	12000	61	224			60000	5		60	
10	85	12.4%	14000	26				64000	6		64	
11	118	17.2%	16000	15	299 336			68000	0		68	
12	144	21.0%	18000	2				72000	3		72	
13	155	22.6%	20000	0				76000	3		76	
14	108	15.8%	22000					80000	3		80	
15	46	6.7%	24000	0				84000	2		84	
TOTAL	685		26000	0				>84000	30		>84	
			>28000	1903	_			TOTAL	1383			
			TOTAL	1703				. •				
SUMMARY	TOTALS	CIE ENEUTE	1396		SORTS B	Y ONE G	ATE ON	LY	698			
		CLE EVENTS	849		SORTS B				685			
		ICLE EVENTS	83									
	DIZIKIROI	TED EVENTS										

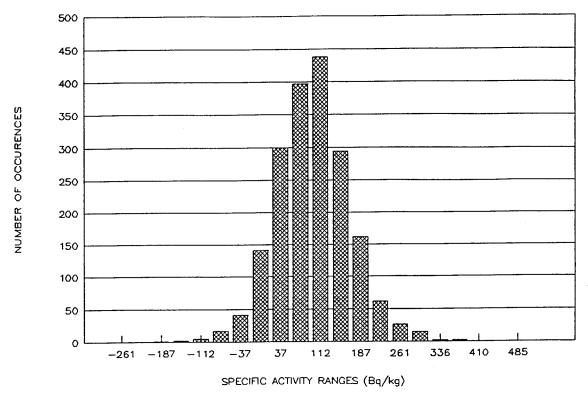
#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

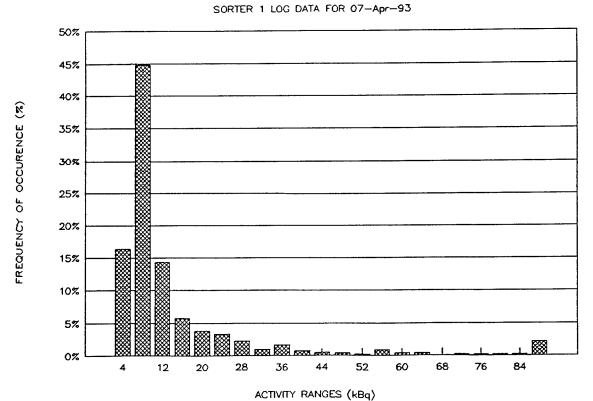
2.00 Empty belt

3.00 Test (No process soil)

SORTER 1 LOG DATA FOR 07-Apr-93



# JA SOIL CLEANUP PLANT HOT PARTICLES



A-199

SORTER 2 07-Apr-93				
AVERAGE BACKGROUND COUNT RATE	0.81 ± 0.0	)5 c/sec		
SORTER SOIL DENSITY	1.15 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m <sup>3</sup>			
		CONTAMINATED	CLEAN	
MASS TOTAL		2.45 tons	97.0 tons	
MAXIMUM/SORT		56.2 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	45.5 kg	
	v			97.5%
WEIGHT RECOVERY OR VOLUME RECOVER		1.94 yd3	76.9 yd³	78.8 yd3/day
EQUIVALENT SOIL-IN-GROUND		,,-		
PARTICLE ACTIVITY (MAXIMUM ESTIMA	TE)			
TOTAL		24,158 kBq		
MAXIMUM/SORT		1,110 kBq		
MINIMUM/SORT		2.6 kBq		
DISPERSED + PARTICLE (REALISTIC E	COTIMATES ACTIVITY	12,408 kBq	6,221 kBq	
	STIPALE) ACTIVITY	841 kBq	18 kBq	
MAXIMUM/SORT		-270 Bq	-17 kBq	
MINIMUM/SORT  SPECIFIC ACTIVITY		5,067 Bq/kg	64 Bq/kg	ı
SPECIAL ROTTE				
WORK HISTORY		WORK DAY END	05:30 PM	
WORK DAY START	06:00 AM	PLANT SHUT-DOWN	05:30 PM	
PLANT START-UP	06:00 AM	END SOIL PROCESSING		
START SOIL PROCESSING	06:27 AM	LUNCH PERIOD	0.0 hr	
LUNCH START	11:30 AM	LONGIT : LINES		
WORK HOURS		11.5 hr		
AVAILABLE HOURS		11.5 hr		
ACTUAL PROCESS H	OURS (total 20-sec records)	10.31 hr		
DOWN-TIME		1.19 hr		
TOTAL SYSTEM PAU	SE	0.70 hr		
NONAVAILABLE HOU	RS	0.0 hr		
START-UP		0.46 hr		
SHUT-DOWN		0.48 hr		
PLANT PERFORMANC	E	89.7% 89.7%		
PRODUCTIVITY		67.7%		
TOTAL SOIL PROCESSING RECORDS (2	-SEC and 20-SEC)	3,197		
NONPROCESS RECORDS (Test, calibr		7		
20-SEC PROCESS RECORDS	•	1,856		
TOTAL SORT		8 MD>0 & MND=0		
NO SORT		600 AD=0 & MD=0		
SOME SORT		1,248 AD>0&0 <md<mn< td=""><td>Dmax&amp;MND<mndmax< td=""><td></td></mndmax<></td></md<mn<>	Dmax&MND <mndmax< td=""><td></td></mndmax<>	
UNEXPLAINED RECO	RDS	0		DALICE
0 <ad<1kbq &="" md="">0</ad<1kbq>			UNEXPLAIN	PAUSE
AD=0	_		TIME	TIME 06:00
AD <0	& MD 1	,	07:16:38	13:03
ACT_P <5 kBq	380 28.3%		07:36:18	13.03

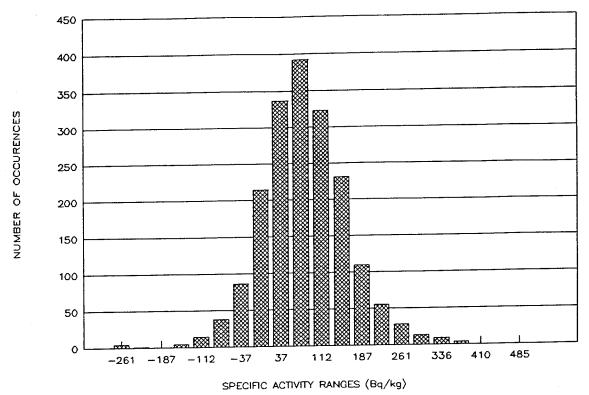
Printed on 05/22/93 at 07:39:01 AM

	2-SEC CO	JNT PERIODS				18,560					13:12:07	13:12
		2-SEC RECORD	S WITH S	ORTS			(ACT_P	>0 .kBq)			13:18:58	13:20
		2-SEC RECORD			IN >1 DE		_	·				
			DETECTO		290		82.2%					
			DETECTO		56		15.9%					
			DETECTO		7		2.0%					
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
			OTAL			353						
		NET 2-SEC RE		TH SORTS		988						
		2-SEC PERIOD				17,572						
		AVG TIME BET				37.6						
1-GATE	SORTS	676	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P	
DETECT	R SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)	
1	21	3.1%	-14000	4	-261			4000	169	12.6%	4	
2		12.9%	-12000	1	-224			8000	540	40.3%	8	
3		18.9%	-10000	0	-187			12000	218	16.3%	12	
4	138	20.4%	-8000	4	-149			16000	109	8.1%	16	
5	136	20.1%	-6000	14	-112			20000	67	5.0%	20	
6	107	15.8%	-4000	38	-75			24000	42	3.1%	24	
7		8.0%	-2000	<b>8</b> 6	-37			28000	34	2.5%	28	
8	5	0.7%	0	214	0			32000	27	2.0%	32	
TOTAL	676		2000	337	37			36000	18	1.3%	36	
			4000	393	<b>7</b> 5			40000	15	1.1%	40	
2-GATE	SORTS	<b>6</b> 65	6000	323	112			44000	14	1.0%	44	
DETECT	R SORTS	FREQ%	8000	231	149			48000	7	0.5%	48	
8			10000	110	187			52000	8	0.6%	52	
9	43	6.5%	12000	55	224			56000	5	0.4%	56	
10	83	12.5%	14000	28	261			60000	10	0.7%	60	
11	161	24.2%	16000	13	299			64000	4	0.3%	64	
12	146	22.0%	18000	9	336			68000	2	0.1%	68	
13	118	17.7%	20000	3	373			72000	7	0.5%	72	
14	92	13.8%	22000	0	410			76000	6	0.4%	76	
15	22	3.3%	24000	0	448			80000	2	0.1%	80	
TOTAL	665		26000	0	485			84000	2	0.1%	84	
			>28000	0	0		>	84000	35	2.6%	>84	
			TOTAL	1863				TOTAL	1341			
SUMMARY	Y TOTALS											
	HOT PART	CLE EVENTS	1346		SORTS BY	ONE G	ATE ONL	Y	676			
	MULTIPART	TICLE EVENTS	1677		SORTS BY	TWO G	ATES		665			
	DISTRIBUT	TED EVENTS	635									

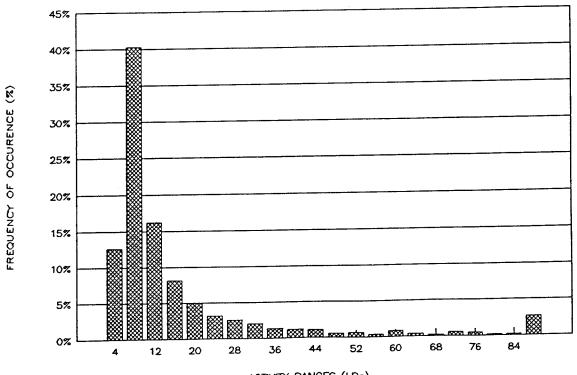
#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 07-Apr-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 07-Apr-93



ACTIVITY RANGES (kBq)

						-		
SORTER 1 06-Apr-93								
AVERAGE BACKGROUND COUNT RATE		0.77			c/sec			
SORTER SOIL DENSITY			tons/m					
GROUND SOIL DENSITY		1.65	tons/m	•	0007447147750	CI CAN		
TOTAL					CONTAMINATED	CLEAN 99.9 1	****	
MASS TOTAL					2.80 tons 53.6 kg	53.6 1		
MAXIMUM/SORT MINIMUM/SORT					0.7 kg	45.5	-	
WEIGHT RECOVERY OR VOLUME RECOVE	-RY							97.3%
EQUIVALENT SOIL-IN-GROUND					2.22 yd3	79.2	vď³	81.4 yd3/day
					,			
PARTICLE ACTIVITY (MAXIMUM ESTIM	MATE)							
TOTAL					19,249 kBq			
MAXIMUM/SORT					245 kBq			
MINIMUM/SORT					2.3 kBq			
DISPERSED + PARTICLE (REALISTIC	ESTIMATE) ACTIVI	TY			9,907 kBq	9,744	кВа	
MAXIMUM/SORT					162 kBq	19 1		
MINIMUM/SORT					0 Bq	-8	(Bq	
SPECIFIC ACTIVITY					3,540 Bq/kg	98 E	3q/kg	
WORK HISTORY								
WORK DAY START	05:50 AM				WORK DAY END	05:30 PM		
PLANT START-UP	05:50 AM				PLANT SHUT-DOWN	05:30 PM		
START SOIL PROCESSING	06:22 AM				END SOIL PROCESSING	05:02 PM		
LUNCH START	11:30 AM				LUNCH PERIOD	0.0 h	ır	
WORK HOURS					11.7 hr			
AVAILABLE HOURS	,				11.7 hr			
ACTUAL PROCESS H	IOURS (total 20-s	ec re	cords)		10.65 hr			
DOWN-TIME					1.02 hr			
TOTAL SYSTEM PAU					0.53 hr			
NONAVAILABLE HOU	IRS				0.0 hr			
START-UP					0.55 hr 0.46 hr			
SHUT-DOWN	·				91.3%			
PLANT PERFORMANO PRODUCTIVITY	.c				91.3%			
PRODUCTIVITI					71.JA			
TOTAL SOIL PROCESSING RECORDS (2	-SEC and 20-SEC)				3,318			
NONPROCESS RECORDS (Test, calibr	ation, etc)				6			
20-SEC PROCESS RECORDS					1,917			
TOTAL SORT					23 MD>0 & MND=0			
NO SORT					858 AD=0 & MD=0			
SOME SORT					1,036 AD>0&0 <hd<hn< td=""><td>Dmax&amp;MND<mnd< td=""><td>)max</td><td></td></mnd<></td></hd<hn<>	Dmax&MND <mnd< td=""><td>)max</td><td></td></mnd<>	)max	
UNEXPLAINED RECO					0		_	
0 <ad<1kbq &="" md="">0</ad<1kbq>	0					UNEXPLAIN		AUSE
	D 446 0					TIME		

TIME 05:50

TIME

None

AD < 0 & MD 0 O AD < 0 & MD 0

ACT\_P <5 kBq

477 34.0%

1,401 (ACT\_P >0 kBq)

19,170

		2-SEC RECORD				1,401	(401_1	20 Kb47			
		2-SEC RECORD	S WITH P	OSITIVES							
		2	DETECTO	RS	305		80.9%				
		3	DETECTO	RS	58		15.4%				
		4	DETECTO	RS	12		3.2%				
		5	DETECTO	RS	2		0.5%				
		6	DETECTO	RS	0		0.0%				
		7	DETECTO	RS	0		0.0%				
		8	DETECTO	RS	0		0.0%				
			OTAL			377					
		NET 2-SEC RE				1,024					
		2-SEC PERIOD				18,146					
		AVG TIME BET	WEEN 2-S	EC SORTS		37.4	sec				
1-GATE	CODIC	707	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
DETECTR		FREQ%	(Bq)		(Bq/kg)			(Bq)	(#)		(kBq)
								4000	252	18.0%	4
1	10	1.4%	-14000	0				4000	252		8
2	40	5.7%	-12000	1				8000	588		12
3	105	14.9%	-10000	2				12000	185		16
4	144	20.4%	-8000	1	-149			16000	110		20
5	165	23.3%	-6000	4	-112			20000	57		24
6	117	16.5%	-4000	16				24000	43		28
7	98	13.9%	-2000	40				28000	22		32
8	28	4.0%	0	118				32000	22		36
TOTAL	707		2000	189				36000	13		40
			4000	335				40000	19		44
2-GATE	SORTS	694	6000	433				44000	9		48
DETECT	SORTS	FREQ%	8000	386				48000	8 6		52
8			10000	248				52000	6		56
9	17		12000	· 108				56000 60000	10		60
10	61		14000	32				64000	4		64
11	118		16000	8				68000	5		68
12	158		18000	1				72000	2		72
13	155		20000	1				76000	2		76
14	113		22000	0				80000	2		80
15	72		24000	0				84000	3		84
TOTAL	694		26000	0	_				33		>84
			>28000	0			,	>84000	1401		-04
			TOTAL	1923				TOTAL	1401		
SUMMARY	Y TOTALS	TOLE EVENTS	1416		SORTS B	Y ONE GA	ATE ON	LY	<b>7</b> 07		
		ICLE EVENTS	1189		SORTS B				694		
		TED EVENTS	1575		20		-				
	DISIKIBO	IED EACHIS	1,71,7								

#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

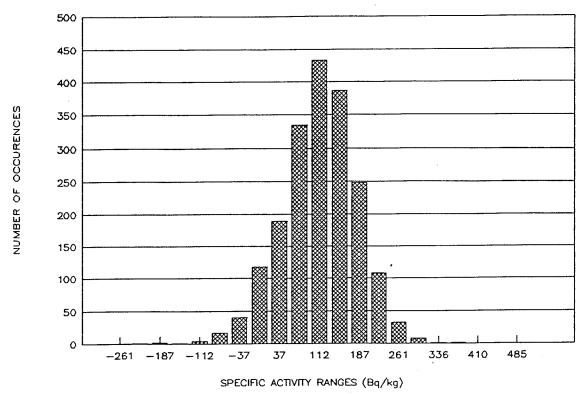
2.00 Empty belt

2-SEC COUNT PERIODS

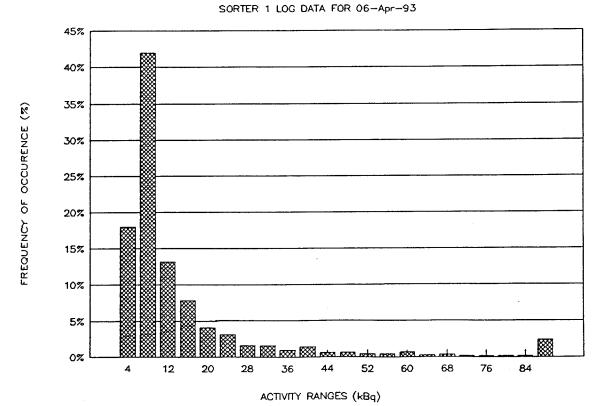
2-SEC RECORDS WITH SORTS

3.00 Test (No process soil)

SORTER 1 LOG DATA FOR 06-Apr-93



## JA SOIL CLEANUP PLANT HOT PARTICLES



SORTER 2 06-Apr-93				
AVERAGE BACKGROUND COUNT RATE	0.81 ± 0.0	5 c/sec		
SORTER SOIL DENSITY	1.15 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³			
drooms sore sensitive		CONTAMINATED	CLEAN	
MASS TOTAL		4.10 tons	98.6 ton	ns
MAXIMUM/SORT		56.2 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	45.5 kg	
Manage San				
WEIGHT RECOVERY OR VOLUME RECOVERY				96.0%
EQUIVALENT SOIL-IN-GROUND		3.25 yd <sup>3</sup>	78.2 yd³	81.4 yd3/day
Laoi McLini Gott III				
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	<b>E)</b>			
TOTAL		22,754 kBq		
MAXIMUM/SORT		304 kBq		
MINIMUM/SORT		2.6 kBq		
DISPERSED + PARTICLE (REALISTIC EST	TIMATE) ACTIVITY	13,771 kBq	9,812 kBd	
MAXIMUM/SORT		268 kBq	18 kBc	•
MINIMUM/SORT		-16679 Bq	-20 kBc	
SPECIFIC ACTIVITY		3,361 Bq/kg	100 Bq/	'kg
WORK HISTORY		,		•
WORK DAY START	05:30 AM	WORK DAY END	05:30 PM	
PLANT START-UP	05:30 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	05:50 AM	END SOIL PROCESSING		
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr	
		40.01		
WORK HOURS		12.0 hr		
AVAILABLE HOURS		12.0 hr		
ACTUAL PROCESS HOU	RS (total 20-sec records)	10.65 hr		
DOWN-TIME		1.35 hr 0.53 hr		
TOTAL SYSTEM PAUSE		0.0 hr		,
NONAVAILABLE HOURS		0.34 hr		
START-UP		0.48 hr		
SHUT-DOWN		88.8%		
PLANT PERFORMANCE		88.8%		
PRODUCTIVITY		00.04		
	50 20 650)	3,373		
TOTAL SOIL PROCESSING RECORDS (2-S		1		
NONPROCESS RECORDS (Test, calibrat	ion, etc)	1,917		
20-SEC PROCESS RECORDS		30 MD>0 & MND=0		
TOTAL SORT		506 AD=0 & MD=0 8	R MND>0	
NO SORT		1,380 AD>0&0<		ax
SOME SORT	e	1		
UNEXPLAINED RECORD	2		UNEXPLAIN	PAUSE
0 <ad<1kbq &="" md="">0</ad<1kbq>	_		TIME	TIME
AD=0 &			05:50:36	05:50
AD<0 &	MU 2 474 32.6%		11:43:36	
ACT_P <5 kBq	717 36.08			

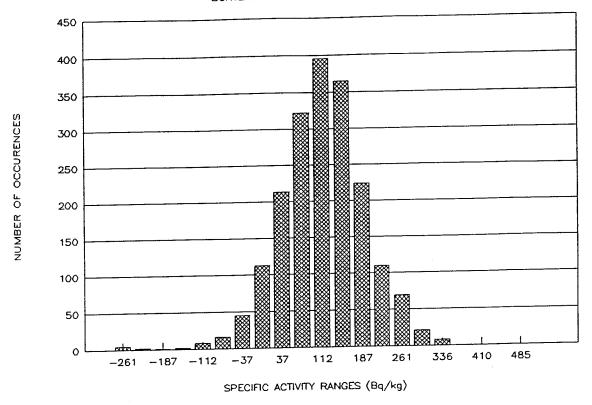
Printed on 05/22/93 at 07:27:18 AM

2	-SEC CO	UNT PERIODS				19,170		13:13:16		
		2-SEC RECORD	S WITH S	ORTS			(ACT_P >0 I	(Bq)		14:14:16
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE		_			
			DETECTO		309		83.1%			
		3	DETECTO	RS	55		14.8%			
	•	4	DETECTO	RS	7		1.9%			
		5	DETECTO	RS	1		0.3%			
		6	DETECTO	RS	0		0.0%			
		7	DETECTO	RS	0		0.0%			
		8	DETECTO	RS	0		0.0%			
		T	OTAL			372				
		NET 2-SEC RE	CORDS WI	TH SORTS		1,084				
		2-SEC PERIOD	S WITH N	O SORTS		18,086				
		AVG TIME BET	WEEN 2-SI	EC SORTS		35.4	sec			
										÷
1-GATE S	ORTS	736	ACT_ND	NUMBER	SPEC_A		ACT_F	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(Bq)	(#)		(kBq)
1	19		-14000	4	-261		4000			
2	99	13.5%	-12000	2	-224		8000			
3	118	16.0%	-10000	1	-187		12000			
4	165	22.4%	-8000	2	-149		16000		7.2%	16
5	145	19.7%	-6000	8	-112		20000		3.8%	20
6	112	15.2%	-4000	16	-75		24000		3.7%	24
7	69	9.4%	-2000	45	-37		28000		2.3%	
8	9	1.2%	0	112	0		32000		1.6%	32
TOTAL	736		2000	213	37		36000		1.2%	36
			4000	322	75		40000		0.8%	40
2-GATE S		720	6000	396	112		44000		1.2%	44
DETECTR	SORTS	FREQ%	8000	365 224	149 187		48000 52000		0.4%	48 52
8	43	6.0%	10000 12000	110	224		56000		0.3%	56
9 10	43 91	12.6%	14000	69	261		60000		0.8%	60
11	164	22.8%	16000	21	299		64000		0.5%	64
12	161	22.4%	18000	8	336		68000		0.5%	68
13	129	17.9%	20000	0	373		72000		0.4%	72
14	95	13.2%	22000	0	410		76000		0.1%	76
15	37	5.1%	24000	0	448		80000		0.1%	80
TOTAL	720	2.1~	26000	0	485		84000		0.0%	84
TOTAL	,,,,		>28000	0	0		>84000		2.5%	>84
			TOTAL	1918	J		TOTAL			
SUMMARY 1	TOTALS			,						
		CLE EVENTS	1481		SORTS BY	ONE GAT	E ONLY	736		
		ICLE EVENTS	2633		SORTS BY			720		
		ED EVENTS	2012							

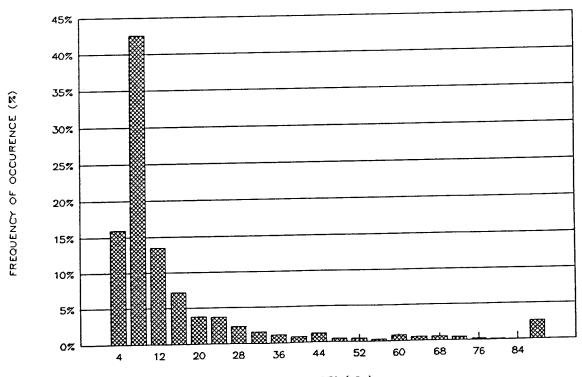
#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 06-Apr-93



JA SOIL CLEANUP PLANT HOT PARTICLES
SORTER 2 LOG DATA FOR 06-Apr-93



ACTIVITY RANGES (kBq)

SORTER 1 05-Apr-93				
AVERAGE BACKGROUND COUNT RATE	0.71 ± 0	.04 c/sec		
SORTER SOIL DENSITY	1.15 tons/m <sup>3</sup>			
GROUND SOIL DENSITY	1.65 tons/m³			
		CONTAMINATED	CLEAN	
MASS TOTAL		0.60 tons	96.6 tons	
MAXIMUM/SORT		56.2 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	47.5 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY				99.4%
EQUIVALENT SOIL-IN-GROUND		0.48 yd <sup>3</sup>	76.5 yd³	77.0 yd3/day
EMOLANIEM 2015 IN GROOM			, , , ,	, , , , , , , , , , , , , , , , , , , ,
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	Έ)			
TOTAL		6,780 kBq		
MAXIMUM/SORT		218 kBq		
MINIMUM/SORT		2.5 kBq		
DISPERSED + PARTICLE (REALISTIC ES	TIMATEL ACTIVITY	3,010 kBq	1,247 kBq	
MAXIMUM/SORT	TIMELY ROLLVIII	191 kBq	14 kBq	
MINIMUM/SORT		0 Bq	-11 kBq	
SPECIFIC ACTIVITY		4,997 Bq/kg	13 Bq/k	3
		, , ,	•	
WORK HISTORY				
WORK DAY START	05:44 AM	WORK DAY END	05:30 PM	
PLANT START-UP	05:44 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:22 AM	END SOIL PROCESSING	05:00 PM	
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr	
WORK HOURS		11.8 hr		•
AVAILABLE HOURS		11.8 hr		
ACTUAL PROCESS HOU	RS (total 20-sec records)	10.07 hr		
DOWN-TIME		1.69 hr		
TOTAL SYSTEM PAUSE		1.14 hr		
NONAVAILABLE HOURS		0.0 hr		
START-UP		0.63 hr		
SHUT-DOWN		0.49 hr		
PLANT PERFORMANCE		85.6%		
PRODUCTIVITY		85.6%		
TOTAL SOIL PROCESSING RECORDS (2-S	EC and 20-SEC)	2,267		
NONPROCESS RECORDS (Test, calibrat		7		
20-SEC PROCESS RECORDS		1,813		
TOTAL SORT		2 MD>0 & MND=0		
NO SORT		1,421 AD=0 & MD=0 8	MND>0	
SOME SORT		390 AD>0&0 <md<mni< td=""><td>Omax&amp;MND<mndmax< td=""><td></td></mndmax<></td></md<mni<>	Omax&MND <mndmax< td=""><td></td></mndmax<>	
UNEXPLAINED RECORD	s .	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	1		UNEXPLAIN	PAUSE .
AD=0 &	MD 1		TIME	TIME
AD<0 &			14:34:00	05:49
ACT_P <5 kBq	140 30.8%		15:12:05	14:13

	2-SEC CO	UNT PERIODS				18,130						14:35
	2 020 00	2-SEC RECORD	S WITH S	ORTS		454	(ACT_P	>0 kBq)				
		2-SEC RECORD			IN >1 DE	TECTOR	_					
			DETECTO		100		83.3%					
		3	DETECTO	RS	19		15.8%					
		4	DETECTO	RS	1		0.8%					
		5	DETECTO	RS	0		0.0%					
		6	DETECTO	RS	0		0.0%					
		7	DETECTO	RS	0		0.0%					
		8	DETECTO	RS	0		0.0%					
		Т	OTAL			120						
		NET 2-SEC RE	CORDS WI	TH SORTS		334						
		2-SEC PERIOD	S WITH N	O SORTS		17,796						
		AVG TIME BET	WEEN 2-S	EC SORTS		108.6	sec					
1-GATE	SORTS	228	ACT_ND		SPEC_A			ACT_P		FREQ%	ACT_P	
DETECTR	R SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)	
		0.7	-14000	1	-261			4000	69	15.2%	4	
1	1		-12000	0	-224			8000	189	41.6%	8	
2	10		-10000	2	-187			12000	70	15.4%	12	
.3	30 47		-8000	4	-149			16000	21	4.6%	16	
4	59		-6000	28	-112			20000	27		20	
5 6	46		-4000	101	-75			24000	11	2.4%	24	
7	29		-2000	255	-37			28000	11	2.4%	28	
8	6		0	392	0		:	32000	10	2.2%	32	
TOTAL	228		2000	439	37		;	36000	4	0.9%	36	
TOTAL			4000	309	75			40000	3	0.7%	40	
2-GATE	SORTS	226	6000	187	112			44000	7	1.5%	44	
DETECT			8000	58	149			48000	4	0.9%	48	
8			10000	30	187			52000	2	0.4%	52	
9	6	2.7%	12000	11	224			56000	7	1.5%	56	
10	17		14000	3	261			60000	3	0.7%	60	
11	47	20.8%	16000	0	299			64000	3		64	
12	50		18000	0	336			68000	1	0.2%	68	
13	50	22.1%	20000	0	373			72000	1	0.2%	72	
14	41	18.1%	22000	0	410			76000	2		76	
15	15	6.6%	24000	0	448			80000	0		80	
TOTAL	226		26000	0	485			84000	1		84	
			>28000	0	0			84000	8	1.8%	>84	
			TOTAL	1820				TOTAL	454			
SUMMARY	Y TOTALS						ATE 04"	v	220			
		ICLE EVENTS	445		SORTS BY			7	228 226			
		TICLE EVENTS	285		SORTS BY	TWO G	AIES		220			
	DISTRIBU	TED EVENTS	166									

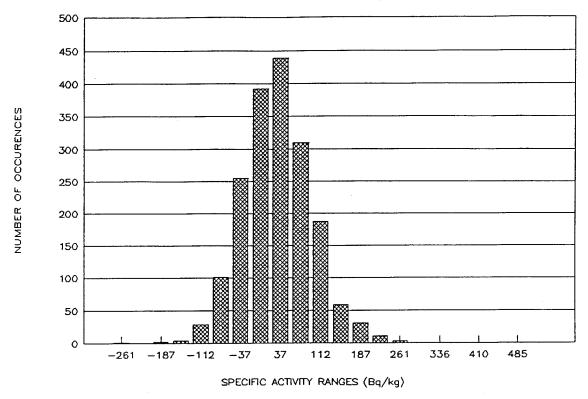
REC CODE EXPLANATION

1.00 Source check (Soil on belt)

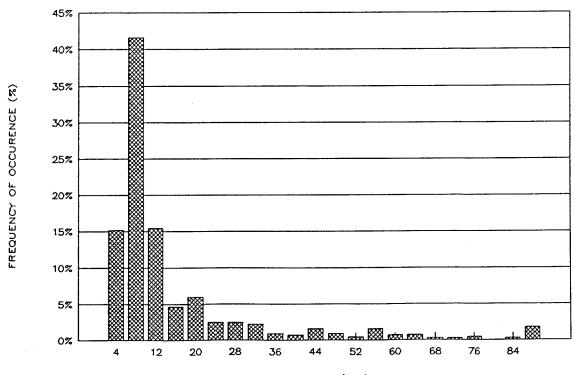
2.00 Empty belt

3.00 Test (No process soil)

SORTER 1 LOG DATA FOR 05-Apr-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 05-Apr-93



ACTIVITY RANGES (kBa)

AVERAGE BACKGROUND COUNT RATE   0.79
SORTER SOIL DENSITY  GROUND SOIL DENSITY  1.65 tons/m²  CONTAMINATED  CO
CONTAMINATED   CLEAN
MASS TOTAL   0.88 tons   97.0 tons
MASS TOTAL  MAXIMUM/SORT  MAXIMUM/SORT  MEIGHT RECOVERY OR VOLUME RECOVERY EQUIVALENT SOIL-IN-GROUND  PARTICLE ACTIVITY (MAXIMUM ESTIMATE)  TOTAL  MAXIMUM/SORT  MAXIMUM/SORT  MINIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MAXIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  SPECIFIC ACTIVITY  MORK DAY START  MORK DAY START  MORK DAY START  MORK DAY END  MORK DAY END  99.1%  99
MAXIMUM/SORT  MINIMUM/SORT  MEIGHT RECOVERY OR VOLUME RECOVERY EQUIVALENT SOIL-IN-GROUND  PARTICLE ACTIVITY (MAXIMUM ESTIMATE)  TOTAL MAXIMUM/SORT MINIMUM/SORT MINIMUM/SORT MINIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT MINIMUM/SORT SPECIFIC ACTIVITY  MORK HISTORY MORK DAY START  MOS 33.6 kg 53.6 kg 47.5 kg  99.1% 76.9 yd3 77.6 yd3/day
MINIMUM/SORT 0.7 kg 47.5 kg  WEIGHT RECOVERY OR VOLUME RECOVERY EQUIVALENT SOIL-IN-GROUND 0.70 yd3 76.9 yd3 77.6 yd3/day  PARTICLE ACTIVITY (MAXIMUM ESTIMATE)  TOTAL 6,374 kBq MAXIMUM/SORT 222 kBq MINIMUM/SORT 2.7 kBq  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY 3,412 kBq 165 kBq MAXIMUM/SORT 155 kBq 15 kBq MINIMUM/SORT 155 kBq 15 kBq MINIMUM/SORT 1079 Bq -12 kBq SPECIFIC ACTIVITY 3,884 Bq/kg 2 Bq/kg  WORK HISTORY WORK DAY START 05:44 AM WORK DAY END 05:30 PM
WEIGHT RECOVERY OR VOLUME RECOVERY EQUIVALENT SOIL-IN-GROUND  PARTICLE ACTIVITY (MAXIMUM ESTIMATE)  TOTAL MAXIMUM/SORT MINIMUM/SORT DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MAXIMUM/SORT MINIMUM/SORT MINI
WEIGHT RECOVERY OR VOLUME RECOVERY  EQUIVALENT SOIL-IN-GROUND  PARTICLE ACTIVITY (MAXIMUM ESTIMATE)  TOTAL  MAXIMUM/SORT  MINIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  SPECIFIC ACTIVITY  WORK HISTORY  WORK DAY START  05:44 AM  WORK DAY END  05:30 PM
### PARTICLE ACTIVITY (MAXIMUM ESTIMATE)  TOTAL
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)  TOTAL  MAXIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  MAXIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  SPECIFIC ACTIVITY  WORK HISTORY  WORK DAY START  05:44 AM  MORK DAY END  6,374 kBq  222 kBq  3,412 kBq  165 kBq  15 kBq  15 kBq  -1079 Bq  -12 kBq  2 Bq/kg
TOTAL  MAXIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  MAXIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  SPECIFIC ACTIVITY  MORK HISTORY  WORK DAY START  MORK DAY END  MORK DAY
TOTAL  MAXIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  MAXIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  SPECIFIC ACTIVITY  MORK HISTORY  WORK DAY START  MORK DAY END  MORK DAY
MAXIMUM/SORT   222 kBq   2.7 kBq
### ### ##############################
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  MINIMUM/SORT  SPECIFIC ACTIVITY  WORK HISTORY  WORK DAY START  DS:44 AM  MORK DAY END  165 kBq  15 kBq  175
155 kBq
MAXIMUM/SORT  MINIMUM/SORT  SPECIFIC ACTIVITY  WORK HISTORY  WORK DAY START  05:44 AM  MORK DAY END  155 kBq  15 kBq  17 kBq  18 kBq  18 kBq  2 Bq/kg  18 kBq  19 kBq  10 10 10 10 10 10 10 10 10 10 10 10 10 1
MINIMUM/SORT SPECIFIC ACTIVITY  WORK HISTORY WORK DAY START  05:44 AM WORK DAY END 05:30 PM
SPECIFIC ACTIVITY  WORK HISTORY  WORK DAY START  05:44 AM  WORK DAY END  05:30 PM
WORK HISTORY WORK DAY START 05:44 AM WORK DAY END 05:30 PM
WORK DAY START 05:44 AM WORK DAY END 05:30 PM
WORK DAY START 05:44 AM WORK DAY END 05:30 PM
PLANT START-UP 05:44 AM PLANT SHUT-DOWN 05:30 PM
START SOIL PROCESSING 05:48 AM END SOIL PROCESSING 05:05 PM
LUNCH START 11:30 AM LUNCH PERIOD 0.0 hr
Editor Climi
WORK HOURS 11.8 hr
AVAILABLE HOURS 11.8 hr
ACTUAL PROCESS HOURS (total 20-sec records) 10.15 hr
DOWN-TIME 1.62 hr
TOTAL SYSTEM PAUSE 1.15 hr
NONAVAILABLE HOURS 0.0 hr
START-UP 0.08 hr
SHUT-DOWN 0.41 hr
PLANT PERFORMANCE 86.3%
PRODUCTIVITY 86.3%
TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,221
NONPROCESS RECORDS (Test, calibration, etc)
20-SEC PROCESS RECORDS 1,827
TOTAL SORT 4 MD>0 & MND=0
NO SORT 1,242 AD=0 & MD=0 & MND>0
SOME SORT 581 AD>0&0 <md<mndmax&mnd<mndmax< td=""></md<mndmax&mnd<mndmax<>
UNEXPLAINED RECORDS 0
O <ad<1kbq &="" md="">O UNEXPLAIN PAUSE</ad<1kbq>
AD=0 & MD 2 TIME TIME
AD<0 & MD 1 05:48:45 05:49
ACT_P <5 kBq 97 24.6% 14:34:00 14:13

Printed on 05/22/93 at 07:18:20 AM

2	-SEC COUNT	PERIODS				18,270			1	4:49:47	14:34
_		SEC RECORD	S WITH S	ORTS			(ACT P >0 kB	<b>a</b> )			
		SEC RECORD			IN >1 D		_	•			
	_		DETECTO		90		82.6%				
			DETECTO		14		12.8%				
			DETECTO		. 5		4.6%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%		•		
		•	DETECTO		0		0.0%				
			DETECTO		0		0.0%				
			OTAL			109					
	NE	T 2-SEC RE		TH SORTS		285					
	2-	SEC PERIOD	S WITH N	O SORTS		17,985					
		G TIME BET				128.2	sec				
1-GATE S	ORTS	209	ACT_ND	NUMBER	SPEC_A		ACT_P	SORT	FREQ%	ACT_P	
DETECTR	SORTS	FREQ%	_ (Bq)		(Bq/kg)		(PB)	(#)		(kBq)	
			•							-	
1	12	5.7%	-14000	0	-261		4000	37	9.4%	4	
2	15	7.2%	-12000	0	-224		8000	157	39.8%	8	
3	<b>3</b> 5	16.7%	-10000	3	-187		12000	55	14.0%	12	
4	49	23.4%	-8000	11	-149		16000	33	8.4%	16	
5	57	27.3%	-6000	39	-112		20000	29		20	
6	24	11.5%	-4000	162	-75		24000	22	5.6%	24	
7	14	6.7%	-2000	281	-37		28000	9	2.3%	28	
8	3	1.4%	0	420	0		32000	10	2.5%	32	
TOTAL	209		2000	394	37		36000	6	1.5%	<b>3</b> 6	
			4000	270	75		40000	8	2.0%	40	
2-GATE S		185	6000	145	112		44000	1	0.3%	44	
DETECTR	SORTS	FREQ%	8000	72	149		48000	1	0.3%	48	
8			10000	22	187		52000	2	0.5%	52	
9	14	7.6%	12000	5	224		56000	6	1.5%	56	
10	23	12.4%	14000	1	261		60000	4	1.0%	60	
11	41	22.2%	16000	2	299		64000	3	0.8%	64 49	
12	54	29.2%	18000	0	336		68000	0	0.0%	68 72	
13	34	18.4%	20000	0	373		72000	0	0.0%	76	
14	14	7.6%	22000	0	410		76000	2	0.5%		
15	5	2.7%	24000	0	448		80000	0	0.0%	80 84	
TOTAL	185		26000	0	485		84000 >84000	0 9	0.0%	>84 >84	
			>28000	1927	0			394	C.34	<b>704</b>	
CIMILARY	TOTALC		TOTAL	1827			TOTAL	374			
SUMMARY 1		E EVENTS	379		SORTS BY	י משב רי	TE ONLY	209			
	OT PARTICL		593		SORTS BY			185			
	ULTIPARTIC ISTRIBUTED		329		30T 13 B	1 WU W	1123	נטו			
U.	TOLKIBUIED	CAEM12	364								

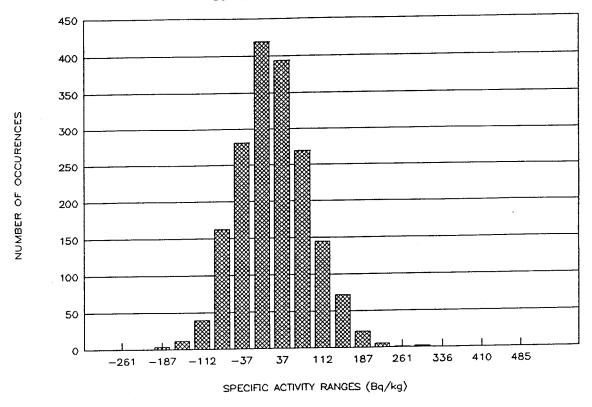
## REC CODE EXPLANATION

1.00 Source check (Soil on belt)

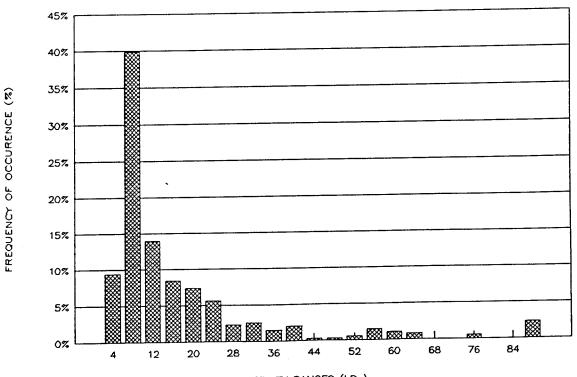
2.00 Empty belt

3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 05-Apr-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 05-APT-93



ACTIVITY RANGES (kBq)

SORTER 1 03-Apr-93				
AVERAGE BACKGROUND COUNT RATE	0.70	± 0.03 c/sec		
SORTER SOIL DENSITY	1.15 ton:	s/m³		
GROUND SOIL DENSITY	1.65 ton:	s/m³		
		CONTAMINATED	CLEAN	
MASS TOTAL		0.99 tons	78.5 tons	
MAXIMUM/SORT		56.2 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	46.9 kg	
WEIGHT RECOVERY OR VOLUME RECOVER	Y			98.8%
EQUIVALENT SOIL-IN-GROUND	•	0.79 yd <sup>3</sup>	62.3 yd³	63.0 yd3/day
PARTICLE ACTIVITY (MAXIMUM ESTIMA	TE)		*	
TOTAL		.9,506 kBq		
MAXIMUM/SORT		452 kBq		
MINIMUM/SORT		2.6 kBq		
DISPERSED + PARTICLE (REALISTIC E	STIMATE) ACTIVITY	4,288 kBq	3,287 kBq	
MAXIMUM/SORT		257 kBq	18 kBq	
MINIMUM/SORT		0 Bq	-7 kBq	
SPECIFIC ACTIVITY		4,327 Bq/kg	42 Bq/ks	3
•				
WORK HISTORY			or 70 ov	
WORK DAY START	06:07 AM	WORK DAY END	05:30 PM	
PLANT START-UP	06:07 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:40 AM	END SOIL PROCESSING	03:01 PM 0.0 hr	
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 m	
WORK HOURS		11.4 hr		
AVAILABLE HOURS		11.4 hr		
ACTUAL PROCESS HO	URS (total 20-sec recor	ds) 8.24 hr		
DOWN-TIME		3.14 hr		
TOTAL SYSTEM PAUS	Ē	0.62 hr		
NONAVAILABLE HOUR	S	0.0 hr		
START-UP		0.55 hr		
SHUT-DOWN		2.48 hr		
PLANT PERFORMANCE		72.4%		
PRODUCTIVITY		72.4%		
TOTAL SOIL PROCESSING RECORDS (2-	SEC and 20-SEC)	2,120		
NONPROCESS RECORDS (Test, calibra		12		
20-SEC PROCESS RECORDS	,,	1,484		
TOTAL SORT		5 MD>0 & MND=0	ı	
NO SORT		965 AD=0 & MD=0		
SOHE SORT		514 AD>0&0 <md<mn< td=""><td></td><td></td></md<mn<>		
UNEXPLAINED RECOR	os	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	0	-	UNEXPLAIN	PAUSE
AD=0			TIME	TIME
AD<0 &			None	06:07
. ACT_P <5 kBq	218 34.3%			12:17
. ACI_F 13 KBQ	F10 34.3%			

A-215

File S1JA0403.WR1

	2-SEC CO	UNT PERIODS	-			14,840						14:52
	2-320 00	2-SEC RECORD	S WITH S	ORTS		-	(ACT P	>0 kBq)				
		2-SEC RECORD			IN >1 DE		_					
			DETECTO		142		80.2%					
		_	DETECTO		29		16.4%					
			DETECTO		5		2.8%					
			DETECTO		1		0.6%					
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
		8	DETECTO	RS	0		0.0%					
		ī	OTAL			177						
		NET 2-SEC RE	CORDS WI	TH SORTS		459						
		2-SEC PERIOD	S WITH N	O SORTS		14,381			•			
		AVG TIME BET	WEEN 2-S	EC SORTS		64.7	sec					
1-GATE	SORTS	323	ACT_ND	NUMBER	SPEC_A			ACT_P		FREQ%	ACT_P	
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)	
								4000	108	17.0%	4	
1	1		-14000	1	-261			4000 8000	268		8	
2	25		-12000	2	-224			12000	90	14.2%	12	
3	46		-10000	3	-187			16000	45	7.1%	16	
4	70		-8000	3	-149 -112			20000	24	3.8%	20	
5	57		-6000	10 41	-112 -75			24000	17		24	
6	55		-4000	135	-37			28000	14	2.2%	28	
7	50		-2000 0	257				32000	10		32	
8	19		2000	352	37			36000	10		36	
TOTAL	323		4000	283	75			40000	7		40	
2-GATE	CORTS	313	6000	194	112			44000	3	0.5%	44	
DETECTR			8000	86	149			48000	3	0.5%	48	
8	30013	· KC-	10000	53				52000	1	0.2%	52	
9	9	2.9%	12000	29				56000	7	1.1%	56	
10	41		14000	17	261			60000	5	0.8%	60	
11	58		16000	22	299			64000	4	0.6%	64	
12	60	19.2%	18000	6	336			68000	2		68	
13	63	20.1%	20000	2	373			72000	1		72	
14	41	13.1%	22000	0	410			76000	0	0.0%	76	
15	41	13.1%	24000	0	448			80000	1		80	
TOTAL	313		26000	0				84000	0		84	
			>28000	0			,	84000	16		>84	
			TOTAL	1496				TOTAL	636			
SUMMARY	TOTALS							v	727			
		ICLE EVENTS	626		SORTS BY			. T	323			
		TICLE EVENTS	460		SORTS BY	TWO G	ATES		313			
	DISTRIBU	TED EVENTS	392									

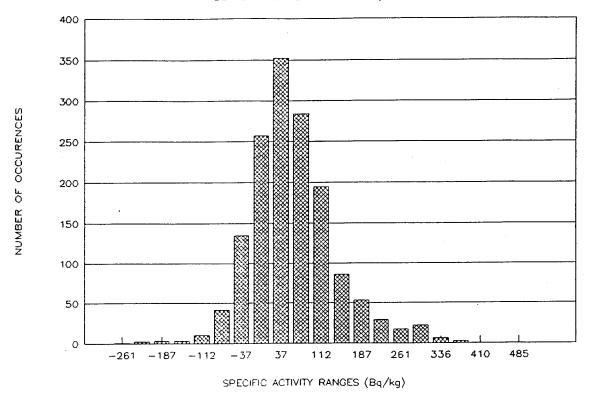
#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

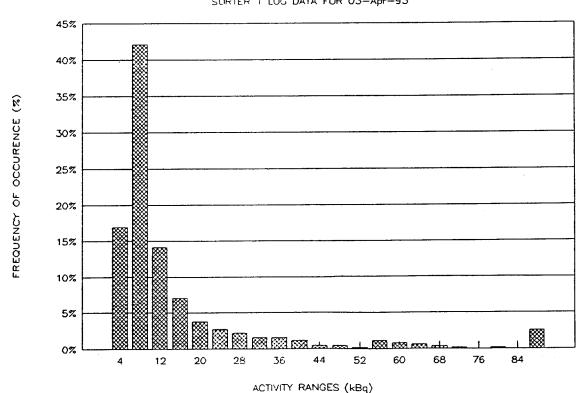
2.00 Empty belt

3.00 Test (No process soil)

SORTER 1 LOG DATA FOR 03-Apr-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 03-Apr-93



A-217

SORTER 2 03-Apr-93				
AVERAGE BACKGROUND COUNT RATE	0.79 ± 0.	04 c/sec		
SORTER SOIL DENSITY	1.15 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³			
		CONTAMINATED	CLEAN	
MASS TOTAL		1.41 tons	78.1 tons	
MAXIMUM/SORT		53.6 kg	53.6 kg	
MINIMUM/SORT	•	0.7 kg	45.5 kg	
	nv.			98.2%
WEIGHT RECOVERY OR VOLUME RECOVE	K1	1.12 yd³	61.9 yd³	63.0 yd3/day
EQUIVALENT SOIL-IN-GROUND		,		
PARTICLE ACTIVITY (MAXIMUM ESTIM	ATE)			
TOTAL		9,346 kBq		
MAXIMUM/SORT		583 kBq		
MINIMUM/SORT		2.6 kBq		
		5 0/5 10	1 751 LO~	
DISPERSED + PARTICLE (REALISTIC	ESTIMATE) ACTIVITY	5,045 kBq	1,751 kBq 18 kBq	
MAX1MUM/SORT		396 kBq	-10 kBq	
MINIMUM/SORT		0 Bq	-10 kbq 22 Bq/kg	•
SPECIFIC ACTIVITY		3,585 Bq/kg	ZZ BY/KS	•
WORK HISTORY				
WORK DAY START	06:07 AM	WORK DAY END	05:30 PM	
PLANT START-UP	06:07 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:40 AM	END SOIL PROCESSING	03:00 PM	
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr	
		11.4 hr		
WORK HOURS		11.4 hr		
AVAILABLE HOURS		8.24 hr		
	OURS (total 20-sec records)	3.14 hr		
DOWN-TIME		0.59 hr		
TOTAL SYSTEM PAU		0.0 hr		
NONAVAILABLE HOU	KS .	0.55 hr		
START-UP		2.49 hr		
SHUT-DOWN	·-	72.4%		
PLANT PERFORMANO	it .	72.4%		
PRODUCTIVITY				
TOTAL SOIL PROCESSING RECORDS (2	-SEC and 20-SEC)	2,045		
NONPROCESS RECORDS (Test, calibr		16		
20-SEC PROCESS RECORDS		1,484		
TOTAL SORT		11 MD>0 & MND=0		
NO SORT		847 AD=0 & MD=0 &		
SOME SORT		626 AD>0&0 <md<mnd< td=""><td>max&amp;MND<mndmax< td=""><td></td></mndmax<></td></md<mnd<>	max&MND <mndmax< td=""><td></td></mndmax<>	
UNEXPLAINED RECO	DRDS	0		DAUCE
0 <ad<1kbq &="" md="">0</ad<1kbq>	2		UNEXPLAIN	PAUSE
AD=0	<b>в м</b> D 0		TIME	TIME
AD<0	& MD 0		10:51:04	06:07
			14:17:24	14:52

561 (ACT\_P >0 kBq)

14,840

		Z-SEC RECOR	A MIII S	OK 13		50	, (vc	- o kbq/			
		2-SEC RECORI	S WITH F	POSITIVES	IN >1 D	ETECTOR	t				
		;	2 DETECTO	ORS	131		85.1%				
		3	3 DETECTO	ORS	20		13.0%				
		4	4 DETECTO	ORS .	2		1.3%				
		9	DETECTO	RS	1		0.6%				
		(	S DETECTO	ORS	0		0.0%				
		7	7 DETECTO	)RS	0		0.0%				
		8	B DETECTO	RS	0		0.0%				
		1	TOTAL			154	•				
		NET 2-SEC RE	CORDS WI	TH SORTS		407	•				
		2-SEC PERIOD	S WITH N	IO SORTS		14,433	;				
		AVG TIME BET	WEEN 2-S	EC SORTS		72.9	sec				
1-GATE S	ORTS	297	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)
1	7	2.4%	-14000	3	-261			4000	79	14.1%	4
2	39	13.1%	-12000	4	-224			8000	226	40.3%	8
3	47	15.8%	-10000	3	-187			12000	86	15.3%	12
4	65	21.9%	-8000	6	-149			16000	44	7.8%	16
5	54	18.2%	-6000	29	-112		;	20000	30	5.3%	20
6	46	15.5%	-4000	90	-75		:	24000	16	2.9%	24
7	29	9.8%	-2000	188	-37		:	28000	14	2.5%	28
8	10	3.4%	0	307	0		3	32000	5	0.9%	32
TOTAL	297		2000	340	37		3	36000	10	1.8%	36
			4000	234	75		4	0000	8	1.4%	40
2-GATE S	ORTS	264	6000	127	112		4	4000	7	1.2%	44
DETECTR	SORTS	FREQ%	8000	72	149		4	8000	2		48
8			10000	37	187		5	2000	4	0.7%	52
9	22	8.3%	12000	25	224		5	6000	3	0.5%	56
10	32	12.1%	14000	16	261		6	0000	3	0.5%	60
11	58	22.0%	16000	13	299		6	4000	4	0.7%	64
12	46	17.4%	18000	5	336		6	8000	1	0.2%	68
13	46	17.4%	20000	1	373		7	2000	1	0.2%	72
14	42	15.9%	22000	0	410		7	6000	2	0.4%	76
15	18	6.8%	24000	0	448		8	0000	0	0.0%	80
TOTAL	264		26000	0	485		ε	4000	0	0.0%	84
			>28000	0	0		>8	4000	16	2.9%	>84
CIMMIADY	TOTAL 6		TOTAL	1500			1	OTAL	561		
SUMMARY 1		CLE EVENTS	EC 1		CODIC OF	ONE 04	TE OU!		207		
		CLE EVENTS	551 400		SORTS BY SORTS BY				297 264		
		ICLE EVENTS ED EVENTS	690 856		SOKIS BI	iw∪ u/	1163		204		
U.	SIKIBUI	EN EAEWIZ	000								

#### REC CODE EXPLANATION

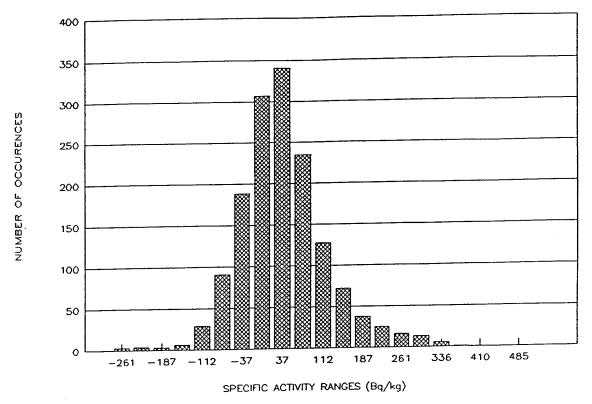
- 1.00 Source check (Soil on belt)
- 2.00 Empty belt

2-SEC COUNT PERIODS

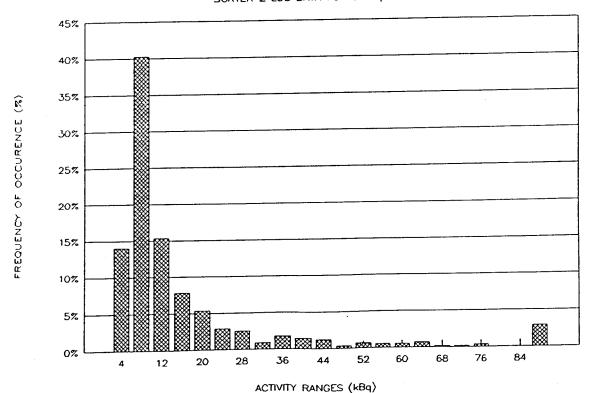
2-SEC RECORDS WITH SORTS

3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 03-Apr-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 03-APT-93



A-220

SORTER 1 02-Apr-93				
AVERAGE BACKGROUND COUNT RATE	0.70 ±	0.04 c/sec		
SORTER SOIL DENSITY	1.15 tons/m	3		
GROUND SOIL DENSITY	1.65 tons/m	3		
		CONTAMINATED	CLEAN	
MASS TOTAL		0.20 tons	37.1 tor	ns
MAXIMUM/SORT		4 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	49.5 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY				99.5%
EQUIVALENT SOIL-IN-GROUND		0.16 yd³	29.4 yd³	29.5 yd3/day
EROLYNCEN, COLD IN GROOM		·	•	
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	E)			
TOTAL		3,427 kBq		
MAXIMUM/SORT		332 kBq		
MINIMUM/SORT		3.0 kBq		
DISPERSED + PARTICLE (REALISTIC ES	TIMATE) ACTIVITY	1,460 kBq	157 kBc	='
MAXIMUM/SORT		251 kBq	15 kBc	
MINIMUM/SORT		0 Bq	-11 kBc	
SPECIFIC ACTIVITY		7,459 Bq/kg	4 Bq/	kg
LIGHT HEATON				
WORK HISTORY	05:55 AM	WORK DAY END	05:30 PM	
WORK DAY START PLANT START-UP	05:55 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	07:48 AM	END SOIL PROCESSING		
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr	
conon oviavi				
WORK HOURS		11.1 hr		
AVAILABLE HOURS		11.1 hr		
ACTUAL PROCESS HOU	RS (total 20-sec records)	3.86 hr		
DOWN-TIME		7.22 hr		
TOTAL SYSTEM PAUSE		6.06 hr		
NONAVAILABLE HOURS		0.0 hr		
START-UP		1.89 hr		
SHUT-DOWN		5.84 hr		
PLANT PERFORMANCE		34.8%		
PRODUCTIVITY		34.8%		
TOTAL SOIL PROCESSING RECORDS (2-SE	C and 20-SEC)	870		
NONPROCESS RECORDS (Test, calibrati	ion, etc)	5		
20-SEC PROCESS RECORDS		695		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		534 AD=0 & MD=0 8	MND>0	
SOME SORT		161 AD>0&0 <md<mne< td=""><td>)max&amp;MND<mndma< td=""><td>x</td></mndma<></td></md<mne<>	)max&MND <mndma< td=""><td>x</td></mndma<>	x
UNEXPLAINED RECORDS	}	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		UNEXPLAIN	PAUSE
AD=0 & M	D 0		TIME	TIME
AD<0 & M	D 0		None	05:58
ACT_P <5 kBq	52 29.7%			06:30

A-221

_		u* 0501006				6,950	<b>)</b>					11:39
2		NT PERIODS	.C 117711 C	NOT C		-		>0 kBq)				
		2-SEC RECORD 2-SEC RECORD			IN >1 DE		_					
					42	120.00	73.7%					
			DETECTO		11		19.3%					
			DETECTO		3		5.3%					
			DETECTO		1		1.8%					
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
			OTAL			57	•					
		NET 2-SEC RE		TH SORTS		118	;					
		2-SEC PERIOD				6,832						
		AVG TIME BET				117.8						
		MAG LINE OF	WEEN E O									
1-GATE S	ODTS	94	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P	
DETECTR	SORTS	FREQ%	(Bq)		(Bq/kg)			(Bq)	(#)		(kBq)	
DETECTA	SURTS		(54)	• • •								
. 4	0	0.0%	-14000	0	-261			4000	31	17.7%	4	
1	7	7.4%	-12000	1	-224			8000	59	33.7%	8	
2 3	15	16.0%	-10000	1	-187			12000	21	12.0%	12	
4	16	17.0%	-8000	0	-149			16000	12	6.9%	16	
5	8	8.5%	-6000	17				20000	13	7.4%	20	
. 6	23	24.5%	-4000	46	-75			24000	3	1.7%	24	
	21	22.3%	-2000	122	-37			28000	5	2.9%	28	
8	4	4.3%	0	142	0			32000	2	1.1%	32	
TOTAL	94		2000	181	37			36000	3	1.7%	36	
TOTAL	•		4000	110	75			40000	4	2.3%	40	
2-GATE S	ORTS	81	6000	41	112			44000	5	2.9%	44	
DETECTR	SORTS	FREQ%	8000	22	149			48000	5	2.9%	48	
8			10000	12	187			52000	2	1.1%	52	
9	3	3.7%	12000	4	224			56000	1	0.6%	56	
10	.13	16.0%	14000	0	261			60000	1	0.6%	60	
11	12	14.8%	16000	1	299			64000	1	0.6%	64	
12	13	16.0%	18000	0	336			68000	0	0.0%	68	
13	7	8.6%	20000	0	373			72000	0	0.0%	72 7:	
14	18	22.2%	22000	0	410			76000	0	0.0%	76	
15	15	18.5%	24000	0	448			80000	0	0.0%	80	
TOTAL	81		26000	0	485			84000	0	0.0%	84	
			>28000	0	0		,	84000	7	4.0%	>84	
			TOTAL	700				TOTAL	175			
SUMMARY	TOTALS											
H	OT PARTI	CLE EVENTS	161		SORTS BY			LY	94			
М	ULTIPART	ICLE EVENTS	129		SORTS BY	TWO C	ATES		81			
D	ISTRIBUT	ED EVENTS	0									

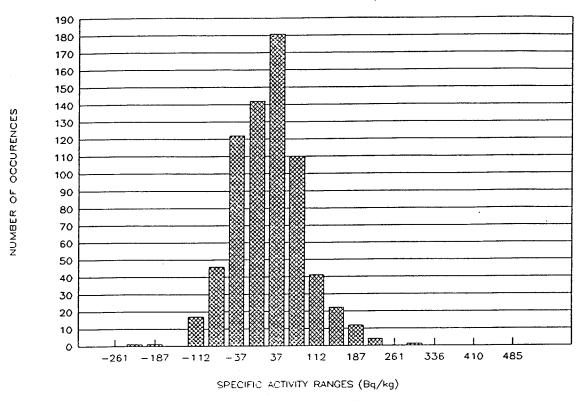
#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

2.00 Empty belt

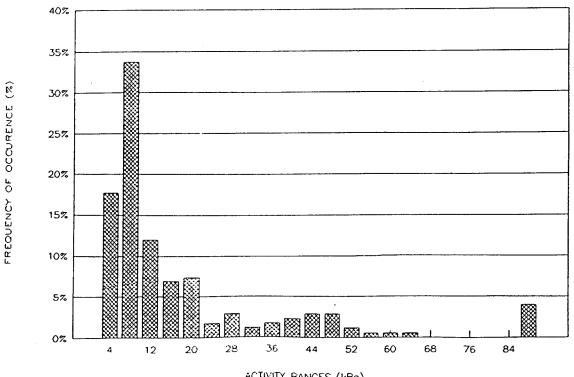
3.00 Test (No process soil)

SORTER 1 LOG DATA FOR 02-Apr-93



## JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 02-Apr-93



ACTIVITY RANGES (kBq)

AVERAGE BACKGROUND COUNT RATE	SORTER 2 02-Apr-93				
1.15 tons/m²   1.65 tons/m²   1.6	AVEDACE RACKGROUND COUNT RATE	0.76 ± 0	.06 c/sec		
MAIST TOTAL   NAIST TOTAL		1.15 tons/m³			
CONTINUATION   CONT		1_65 tons/m³			
MAST SOTIAL  MATHAM/SORT  MINIM/M/SORT  MINIM/M/SORT  MINIM/M/SORT  MINIM/M/SORT  MINIM/M/SORT  MINIM/M/SORT  MINIM/M/SORT  MATHAM/SORT  TOTAL  MAXIMAM/SORT  MINIM/M/SORT  MORE DATASTATE  SPECIFIC ACTIVITY  MORE DATASTATE  MORE DATASTATE  MORE DATASTATE  MORE DATASTATE  MORE DATASTATE  MORE MUSISMATE  MORE MU	GROUND SOIL DENSITY		CONTAMINATED		
MAXIMALM/SORT   1,5,4 kg   13.6 kg   1,7 kg   46.2 kg   29.7 yd²/day	MASS TOTAL		0.25 tons		
MINIMUM/SORT  WEIGHT RECOVERY OR VOLUME RECOVERY EQUITVALENT SOIL-IN-CROUND  PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL MAXIMUM/SORT HINIMUM/SORT HINIMUM/SORT HINIMUM/SORT MAXIMUM/SORT HINIMUM/SORT HINIMUM/SORT HINIMUM/SORT HINIMUM/SORT OB 8q 11 k8q 11,574)k8q 11 k8q 11 k8q 6q 11 k8q 6			5.4 kg	-	
MATHEMATICAL PROCESS FECORDS   29.5 yd   29.7 yd   29.		•	0.7 kg	48.2 kg	
PARTICLE ACTIVITY (MAXIMM ESTIMATE)					99.3%
PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL  MAXIMUM/SORT MINIMUM/SORT MORE DAY START MORE DAY START PLANT START-UP START SOLL PROCESSING FLANT START-UP START SOLL PROCESSING MORE HOURS AVAILABLE HOURS AVAILABLE HOURS ACTUAL PROCESS NECORDS (total 20-sec records) DOWN-TIME MONAWAILABLE HOURS START-UP SINIT-DOWN MONAWAILABLE HOURS START-UP SINIT-DOWN PLANT SHART-UP SINIT-DOWN FIRE MONAWAILABLE HOURS START-UP SINIT-DOWN PLANT PERFORMANCE MONAWAILABLE HOURS START-UP SINIT-DOWN PLANT PERFORMANCE FROUDETIVITY  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) SO SOR  MONOROCESS RECORDS (Fest, calibration, etc)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) SOR SORT UNEXPLAINED RECORDS  O MONO & MINDO  AD-0 & MOD 0  UNEXPLAINED PAUSE O MONO & MINDO  O MOD 0 MINDO  O MOD 0 MINDO  O MOS 0 MOD 0 MINDO  O MOS 0 MOD 0 MONO & MINDO  O MOS 0 MOD 0 MONO & MINDO  O MOS 0 MOD 0 MONO & MOD 0  O MOS 0 MOD 0 MONO & MOD 0  O MOS 0 MOD 0 MONO & MOD 0  O MOS 0 MOD 0 MONO & MOD 0  O MOS 0 MOD 0 MONO & MOD 0  O MOS 0 MOD 0 MONO & MOD 0  O MOS 0 MOD 0 MONO & MOD 0  TIME TIME TIME TIME TOTAL SOIL PROCESSING PAUSE O MOD 0 MOD 0 MOD 0  O M			0.20 vd3	29.5 yd³	29.7 yd3/day
TOTAL  MAXIMUM/SORT  HINIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  MAXIMUM/SORT  MAXIMUM/SORT  MAXIMUM/SORT  SPECIFIC ACTIVITY  WORK HISTORY  WORK DAY START  D5:55 AM  PLANT SHRIT-DP  START SOIL PROCESSING  UNCH HOURS  AVAILABLE HOURS  AVAILABLE HOURS  AVAILABLE HOURS  ACTUAL PROCESS HOURS (total 20-sec records)  DOWN-TIME  TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SIART-UP  SIART-UP  SIART-UP  SOUN-TIME  TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOWN  11.1 hr  17.21 hr  10.0 hr  12.8 hr  11.1 hr  17.21 hr  10.0 hr  18.8 hr  18.9 hr  18	EQUIVALENT SOIL-IN-GROUND		0.20 /4	·	•
TOTAL  MAXIMUM/SORT  HINHUM/SORT  AXAMINIM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  MAXIMUM/SORT  MAXIMUM/SORT  SPECIFIC ACTIVITY  WORK HISTORY  WORK DAY START  DS:55 AM  PLANT SHRIT-DP  START SOIL PROCESSING  UNCH HOURS  AVAILABLE HOURS  AVAILABLE HOURS  AVAILABLE HOURS  ACTUAL PROCESS HOURS (total 20-sec records)  DOWN-TIME  TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SIART-UP  SIART-UP  SIART-UP  SOUN-TIME  TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOWN  START-UP  SHUT-DOWN  START-UP  SHUT-DOWN  TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY  TOTAL SOIL PROCESSING RECORDS  TOTAL SOIL PROCESS RECORDS  TOTAL SOIL PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  O-AD-CLEAR AND O  UNEXPLAINED RECORDS  O-AD-CLEAR AND O  UNEXPLAINED RECORDS  O-AD-CLEAR AND O  UNEXPLAIN PAUSE  NONE  OSSIGN  TIME  TIME  TIME  TIME  OSSIGN  TIME  TIME  OSSIGN  OSSIGN  TIME  TIME  OSSIGN  OSSIGN  TIME  TIME  OSSIGN  OSSIGN  OSSIGN  TIME  TIME  OSSIGN  OSSIGN  OSSIGN  TIME  TIME  OSSIGN  OSSIGN  OSSIGN  OSSIGN  OSSIGN  OSSIGN  OSSIGN  TIME  TIME  OSSIGN  OSSIGN  OSSIGN  OSSIGN  OSSIGN  OSSIGN  OSSIGN  OSSIGN  OND OSSIGN  OND OSSIGN OND OSSIGN OND OSSIGN OND OSSIGN OND OSSIGN OND OSSIGN OND OSSIGN OND OSSIGN OND OSSIGN OND OSSIGN OSSIGN OND O	PARTICLE ACTIVITY (MAXIMUM ESTIMAT	E)			
MAXIMM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMM/SORT  MAXIMM/SORT  MAXIMM/SORT  MINIMM/SORT  SPECIFIC ACTIVITY  MORK DAY START  MORK D			•		
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  MAXIMUM/SORT  SPECIFIC ACTIVITY   NORK HISTORY  NORK DAY START  DS:55 AM  NORK DAY END  DS:30 PM  PLANT START-UP  START SOIL PROCESSING  O7:48 AM  LUNCH PERIOD  DOMN-TIME  AVAILABLE HOURS  ACTUAL PROCESS HOURS (total 20-sec records)  DOMN-TIME  TOTAL SYSTEM PAUSE  NONAWAILABLE HOURS  ACTUAL PROCESS HOURS  START-UP  SHOT-DOWN  PLANT SHOT-DOWN  START-UP  SHOT-DOWN  PLANT SHOT-DOWN  START-UP  SHOT-DOWN  PLANT SHOT-DOWN  START-UP  SHOT-DOWN  START-UP  SHOT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY  35.0X  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NOMPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0-4D-0 & MD 0  UNEXPLAINED RECORDS  0-4D-0 & MD 0  UNEXPLAINED PAUSE  UNEXPLAINED RECORDS  0-60-30  UNEXPLAIN PAUSE  TIME  TIME  AD-0 & MD 0  OS-30  PM  DOS:30 PM  PLANT SHUT-DOWN  DOS:30 PM  DOS:30 PM  PLANT SHUT-DOWN  DOS:30 PM  DOS:30 PM  PLANT SHUT-DOWN  DOS:30 PM  DOS:30	MAXIMUM/SORT		231 kBq		
11 kBq	MINIMUM/SORT		2.8 k8q		
MAXIMUM/SORT SPECIFIC ACTIVITY  WORK HISTORY  WORK DAY START UNCE DAY START O5:55 AM START SOIL PROCESSING UNCH START UNC	DICHERCED + DARTICLE (DEALICTIC FO	STIMATE) ACTIVITY	1,488 kBq	(1,574)kBq	
MINIMUM/SORT SPECIFIC ACTIVITY  SPECIFIC ACTIVITY  WORK DAY START  MORK DAY START  D5:55 AM  PLANT START-UP  START SOIL PROCESSING  MORK DAY END  MORK DAY END  START SOIL PROCESSING  MORK DAY START  11:30 AM  LUNCH PERIOD  11:40 AM  LUNCH PERIOD  0.5 hr  11:11 hr  AVAILABLE HOURS  ACTUAL PROCESS HOURS (total 20-sec records)  DOWN-TIME  TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOWN  START-UP  SHUT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY  35:0%  TOTAL SOIL PROCESSING RECORDS (2-sec and 20-sec)  NOMPROCESS RECORDS  TOTAL SOIL PROCESSING RECORDS (2-sec and 20-sec)  SESS  TOTAL SOIL PROCESSING RECORDS  TOTAL SOIL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0-AD<0 & MD  AD 0 & MD 0  UNEXPLAIN PAUSE  TIME  TOTAL TO THE TIME  TO TO		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	194 kBq	11 k <u>B</u> q	
SPECIFIC ACTIVITY			0 Bq	-13 kBq	
NORK DAY START   O5:55 AM			5,908 Bq/kg	(42)Bq/kg	
NORK DAY START	WORK HISTORY			<b></b>	
PLANT START-UP	WORK DAY START	05:55 AM			
LUNCH START   11:30 AM	PLANT START-UP	05:55 AM			
LUNCH START		07:48 AM			
AVAILABLE HOURS  ACTUAL PROCESS HOURS (total 20-sec records)  ACTUAL PROCESS HOURS (total 20-sec records)  DOWN-TIME  TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  AD=0 & MD>0  AD=0 & MD  O MD>0  NO MOPO  NO MOPO  AD=0 & MD  O MD>0  NO MEXPLAIN  TIME  TIME  NO MOPO  O MOPO  NO MOPO  NO MEXPLAIN  TIME  TIME  TIME  NO MOPO  O MOPO  O MOPO  AD=0 & MD  O MOPO  O MOPO  AD=0 & MD  O MOPO  O MOPO  AD=0 & MD  O MOPO  O MOPO  O MOPO  AD=0 & MD  O MOPO  O MOPO  O MOPO  TIME  TIME  TIME  O MOPO  O MOPO  O MOPO  O MOPO  O MOPO  AD=0 & MD  O MOPO  O	LUNCH START	11:30 AM	LUNCH PERIOD	0.5 nr	
AVAILABLE HOURS  ACTUAL PROCESS HOURS (total 20-sec records)  DOWN-TIME  TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS  TOTAL SORT  NO SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  O MD>0 & MND=0  TIME  TIME  AD=0 & MD 0  NO no  NO no  TIME  TIME  TIME  NO no  O No-3 0  O No-3 0  O No-3 0	NORK HOURS		11.1 hr		
ACTUAL PROCESS HOURS (total 20-sec records)  DOMN-TIME  TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0-AD<1 kbg & MD>0  NO e  AD=0 & MD 0  NO e  N			11.1 hr		
DOWN-TIME		JRS (total 20-sec records)	3.88 hr		
NONAVAILABLE HOURS   0.0 hr   1.89 hr   5.82 hr   5.82 hr   35.0%			7.21 hr		
1.89 hr   5.82 hr   35.0%	TOTAL SYSTEM PAUSI		6.04 hr		
START-UP	NONAVAILABLE HOURS	5	0.0 hr		
SHU1-DUM    PLANT PERFORMANCE   35.0%	START-UP				
PRODUCTIVITY 35.0%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 855  NONPROCESS RECORDS (Test, calibration, etc) 5  20-SEC PROCESS RECORDS 698  TOTAL SORT 0 MD>0 & MND=0  474 AD=0 & MD=0 & MND>0  NO SORT 224 AD>0&0-MD <mndmax&mnd<mndmax &="" 0="" 0<ad<1kbq="" md="" records="" unexplained="">0 0  AD=0 &amp; MD 0 0  NONE 05:58  NONE 06:30</mndmax&mnd<mndmax>	SHUT-DOWN				
PRODUCTIVITY 35.0%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 855  NONPROCESS RECORDS 5  20-SEC PROCESS RECORDS 698  TOTAL SORT 0 MD>0 & MND=0  NO SORT 474 AD=0 & MD=0 & MND>0  SOME SORT 224 AD>0&0	PLANT PERFORMANCE				
NONPROCESS RECORDS (Z=Set and Z0 set)			35.0%		
NONPROCESS RECORDS   5   5   5   5   5   5   5   5   5	TOTAL SOIL PROCESSING RECORDS (2-)	SEC and 20-SEC)	855		
20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 < AD<1 kBq & MD > 0 & MD > 0 & MND = 0  AD = 0 & MD  AD < 0 & MD  NO SORT  UNEXPLAIN PAUSE  TIME  TIME  TIME  None  05:58			5		
TOTAL SORT		·			
SOME SORT  UNEXPLAINED RECORDS  0   UNEXPLAIN PAUSE  0   AD=0 & MD					
SOME SORT       224 AD>0&0 <md<mndmax&mnd<mndmax< td="">         UNEXPLAINED RECORDS       0         0<ad<1kbq &="" md="">0       UNEXPLAIN PAUSE         AD=0 &amp; MD 0       TIME TIME         AD&lt;0 &amp; MD 0</ad<1kbq></md<mndmax&mnd<mndmax<>	• •				
UNEXPLAINED RECORDS 0  UNEXPLAIN PAUSE  0 < AD < 1 kBq & MD > 0  AD = 0 & MD 0  AD = 0 & MD 0  AD < 0 & MD 0  O6 - 3 0			224 AD>0&0 <md<mne< td=""><td>max&amp;MND<mndmax< td=""><td></td></mndmax<></td></md<mne<>	max&MND <mndmax< td=""><td></td></mndmax<>	
0 <ad<1kbq &="" md="">0</ad<1kbq>		os	0		
AD=0 & MD 0 TIME TIME  AD<0 & MD 0 None 05:58				•	
AD<0 & MU U		MD 0		TIME	
06.30	AD<0 &	MD 0		None	
VOIE 2 YOUR	ACT_P <5 kBq	45 28.7%			U6:30

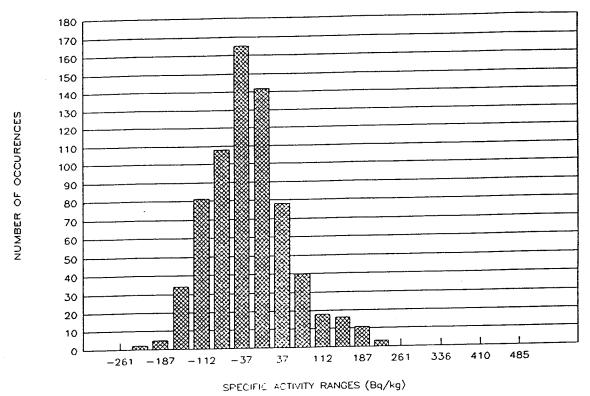
Printed on 05/22/93 at 06:58:42 AM

11:41 6,980 2-SEC COUNT PERIODS 157 (ACT P >0 kBq) 2-SEC RECORDS WITH SORTS 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR 37 82.2% 2 DETECTORS 7 15.6% **3 DETECTORS** 2.2% 1 4 DETECTORS 0 0.0% 5 DETECTORS 0 0.0% 6 DETECTORS 0 0.0% 7 DETECTORS 0 0.0% 8 DETECTORS 45 TOTAL 112 MET 2-SEC RECORDS WITH SORTS 2-SEC PERIODS WITH NO SORTS 6,868 AVG TIME BETWEEN 2-SEC SORTS 124.6 sec ACT P SORT FREQ% ACT\_P NUMBER SPEC\_A ACT ND 1-GATE SORTS 78 (kBq) SORTS (#) (Bq/kg) (Bq) (#) FREQ% (Bq) DETECTR 4 15.9% 4000 25 2 2.6% -14000 0 -261 1 -224 8000 35.0% 8 -12000 2 2 13 16.7% 14.0% 12 15.4% -10000 -187 12000 22 3 12 -149 16000 12 7.6% 16 15.4% -8000 34 4 12 7 4.5% 20 20000 81 -112 5 15 19.2% -6000 3.2% 24 24000 5 -75 6 15 19.2% -4000 108 2.5% 28 7 9 11.5% -2000 165 -37 28000 4 0 32000 5 3.2% 32 8 0 0.0% 0 142 37 36000 3 1.9% 36 2000 78 78 TOTAL 40000 0 0.0% 40 4000 75 40 112 44000 3 1.9% 44 79 6000 18 2-GATE SORTS 48000 4 2.5% 48 DETECTR SORTS FREQ% 8000 16 149 10000 11 187 52000 3 1.9% 52 8 56000 3 1.9% 56 9 8 10.1% 12000 3 224 60000 0.0% 60 261 10.1% 0 14000 10 8 64 0.6% 64000 19.0% 16000 0 299 11 15 68000 0.0% 68 336 20.3% 18000 0 12 16 0.0% 72 13 17 21.5% 20000 373 72000 0 13.9% O 410 76000 0 0.0% 76 22000 14 11 80000 0 0.0% RA 5.1% 24000 0 448 15 4 0 0.0% 84 485 84000 0 26000 TOTAL 79 5 3.2% >84 >28000 0 0 >84000 703 TOTAL 157 TOTAL SUMMARY TOTALS HOT PARTICLE EVENTS 158 SORTS BY ONE GATE ONLY 78 MULTIPARTICLE EVENTS SORTS BY TWO GATES 79 216 DISTRIBUTED EVENTS 0

#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 02-Apr-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 02-Apr-93

40% 35% FREQUENCY OF OCCURENCE (%) 30% 25% 20% 15% 10% 5% 0% 68 76 84 60 20 28 36 12

ACTIVITY RANGES (kBq)
A-226

SORTER 1 01-Apr-93					
AVERAGE BACKGROUND COUNT RATE		0.71 ±	0.04 c/sec		
SORTER SOIL DENSITY		1.15 tons/m	13		
GROUND SOIL DENSITY		1.65 tons/m	13		
			CONTAMINATED	CLEAN	
MASS TOTAL			0.55 tons	95.0 tons	
MAXIMUM/SORT			56.2 kg	53.6 kg	
MINIMUM/SORT			0.7 kg	48.2 kg	
WEIGHT RECOVERY OR VOLUME RECOV	(FDY				99.4%
EQUIVALENT SOIL-IN-GROUND	EKI		0.44 yd³	75.3 yd³	75.7 yd³/day
EGOIANTER! 2015 IN DICOUR					
PARTICLE ACTIVITY (MAXIMUM EST)	MATE)				
TOTAL			5,254 kBq		
MAXIMUM/SORT			260 kBq		
MINIMUM/SORT			2.4 kBq		
		V	2,454 kBq	145 k8q	
DISPERSED + PARTICLE (REALISTIC	ESTIMATE) ACTIV	/111	179 kBq	13 kBq	
MAXIMUM/SORT			-3132 Bq	-11 kBq	
MINIMUM/SORT			4,471 Bq/kg	2 Bq/k	(a
SPECIFIC ACTIVITY			4,411 bd/kg	2 547	.5
WORK HISTORY					
WORK DAY START	05:44 AM		WORK DAY END	05:30 PM	
PLANT START-UP	05:44 AM		PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:19 AM		END SOIL PROCESSIN	G 04:55 PM	
LUNCH START	11:30 AM		LUNCH PERIOD	0.0 hr	
Work Hours			11.8 hr		
			11.8 hr		
AVAILABLE HOURS	, HOURS (total 20-	eer records			
DOWN-TIME	HOOKS (LOCAL ED	300 1000103	1.87 hr		
TOTAL SYSTEM PA	NICE		1.25 hr		
NONAVAILABLE HO			0.0 hr		
START-UP	<b>X</b> OR 3		0.59 hr		
SHUT-DOWN			0.58 hr		
PLANT PERFORMAN	ıce		84.1%		•
PRODUCTIVITY			84.1%		
			2 407		
TOTAL SOIL PROCESSING RECORDS		<b>(</b> )	2,193		
NONPROCESS RECORDS (Test, calil	oration, etc)		11		
20-SEC PROCESS RECORDS			1,782	n	
TOTAL SORT			1 MD>0 & MND=		
NO SORT			1,368 AD=0 & MD=0		,
SOME SORT			413 AD>0&0 <md<m< td=""><td>(PIIIUNE ANDROYPHIAN</td><td>•</td></md<m<>	(PIIIUNE ANDROYPHIAN	•
UNEXPLAINED REC			. 0	UNEXPLAIN	PAUSE
0 <ad<1kbq &="" md=""></ad<1kbq>	_			TIME	TIME
				07:39:28	05:44
AD<0	) & MD 1			01.37.20	03.44

06:59

08:06:28

ACT\_P <5 kBq

134

32.6%

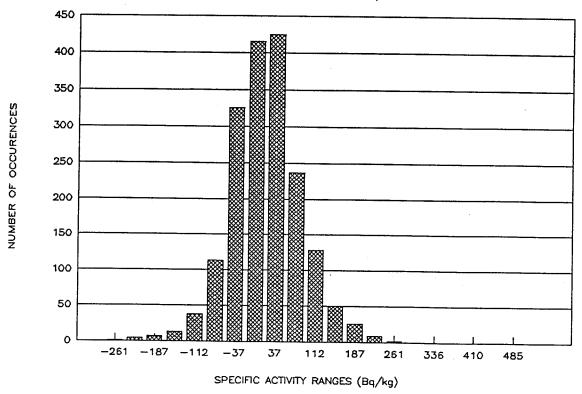
2-SEC COUNT PERIODS	17,820					
2-SEC RECORDS WITH SORTS	•	411 (ACT_P >0 kBq)				
2-SEC RECORDS WITH POSITIVES	IN >1 DETEC	TOR				
2 DETECTORS	89	84.8%				
3 DETECTORS	13	12.4%				
4 DETECTORS	2	1.9%				
5 DETECTORS	1	1.0%				
6 DETECTORS	0	0.0%				
7 DETECTORS	0	0.0%				
8 DETECTORS	0	0.0%				
TOTAL		105				
NET 2-SEC RECORDS WITH SORTS		306				
2-SEC PERIODS WITH NO SORTS	17,	514				
AVG TIME BETWEEN 2-SEC SORTS	110	6.5 sec				

1-GATE S	ORTS	210	ACT_ND	NUMBER	SPEC_A	ACT_P		FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
_	1	0.5%	-14000	1	-261	4000	78	19.0%	4
1	17	8.1%	-12000	4	-224	8000	161	39.2%	8
2		15.2%	-10000	7		12000	66	16.1%	12
3	32 45	21.4%	-8000	13	-149	16000	32		16
4	45 39	18.6%	-6000	38	-112	20000	18	4.4%	20
5	34	16.2%	-4000	113	-75	24000	17	4.1%	24
6 7	29	13.8%	-2000	326		28000	7	1.7%	28
8	13	6.2%	0	415	0	32000	3	0.7%	32
TOTAL	210	0.2%	2000	425	37	36000	1	0.2%	36
TOTAL	210		4000	237	75	40000	4	1.0%	40
2-GATE SO	nets.	201	6000	128	112	44000	4	1.0%	44
DETECTR	SORTS	FREQ%	8000	50	149	48000	2	0.5%	48
8	301113		10000	25	187	52000	2	0.5%	52
9	7	3.5%	12000	9	224	56000	6	1.5%	56
10	26	12.9%	14000	2	261	60000	2	0.5%	60
11	34	16.9%	16000	0	299	64000	0	0.0%	64
12	51	25.4%	18000	0	336	68000	2	0.5%	68
13	35	17.4%	20000	0	373	72000	0	0.0%	72
14	28	13.9%	22000	. 0	410	76000	1	0.2%	76
15	20	10.0%	24000	0	448	80000	0	0.0%	80
TOTAL	201	******	26000	0	485	84000	0	0.0%	84
TOTAL			>28000	0	0	>84000	5	1.2%	>84
			TOTAL	1793		TOTAL	411		
SUMMARY 1	TOTALS								
н	T PARTICL	E EVENTS	415		SORTS BY	ONE GATE ONLY	210		
M	JLTIPARTIC	LE EVENTS	317		SORTS BY	TWO GATES	201		
DI	STRIBUTED	EVENTS	83						

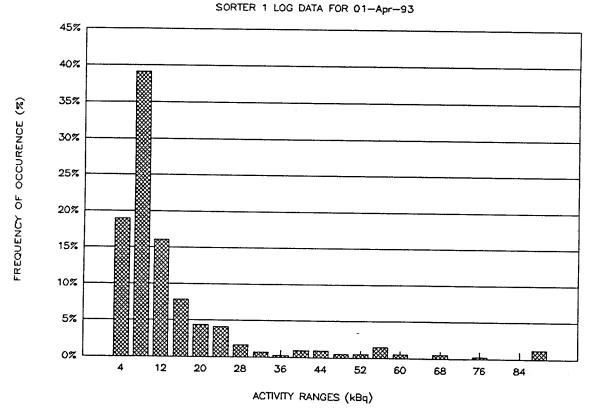
## REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 1 LOG DATA FOR 01-Apr-93



# JA SOIL CLEANUP PLANT HOT PARTICLES



SORTER 2 01-Apr-93				
AVERAGE BACKGROUND COUNT RATE	0.79 ± 0.	04 c/sec		
SORTER SOIL DENSITY	1.15 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³			
GROUND SOIL DENSITY		CONTAMINATED	CLEAN	
WAS TOTAL		0.68 tons	93.7 tons	
MASS TOTAL  MAXIMUM/SORT		56.2 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	48.9 kg	
HIRITION SON				
WEIGHT RECOVERY OR VOLUME RECOVERY	,			99.3%
EQUIVALENT SOIL-IN-GROUND		0.54 yd³	74.3 yd³	74.9 yd³/day
Laoi McLiny Colo				
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	E)			
TOTAL		5,437 kBq		
MAXIMUM/SORT		364 kBq	•	
MINIHUM/SORT		2.6 kBq		
			42 010\\n-	
DISPERSED + PARTICLE (REALISTIC ES	STIMATE) ACTIVITY	3,025 kBq	(2,919)kBq	
MAXIMUM/SORT		272 kBq	14 kBq	
MINIMUM/SORT		-8239 Bq	-19 kBq	
SPECIFIC ACTIVITY		4,426 Bq/kg	(31)Bq/kg	
•				
WORK HISTORY			05-70 DH	
WORK DAY START	05:44 AM	WORK DAY END	05:30 PM	
PLANT START-UP	05:44 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:19 AM	END SOIL PROCESSING		
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr	
		44 0 ha		
WORK HOURS		11.8 hr 11.8 hr		
AVAILABLE HOURS		9.79 hr		
ACTUAL PROCESS HO	URS (total 20-sec records)	1.98 hr		
DOWN-TIME		1.28 hr		
TOTAL SYSTEM PAUS		0.0 hr		
NONAVAILABLE HOUR	S .	0.59 hr		
START-UP		0.62 hr		
SHUT-DOWN		83.2%		
PLANT PERFORMANCE		83.2%		
PRODUCTIVITY		W.24		
		2,133		
TOTAL SOIL PROCESSING RECORDS (2-		26		
NONPROCESS RECORDS (Test, calibra	tion, etc)	1,762		
20-SEC PROCESS RECORDS		1 MD>0 & MND=0		
TOTAL SORT		1,202 AD=0 & MD=0 8	& MND>0	
NO SORT		559 AD>0&0 <md<mni< td=""><td></td><td></td></md<mni<>		
SOME SORT		0		
UNEXPLAINED RECOR		•	UNEXPLAIN	PAUSE
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		TIME	TIME
AD=0 &			07:39:28	05:44
AD<0 &				06:57
ACT_P <5 kBq	102 27.5%			

371 (ACT\_P >0 kBq)

17,620

		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR				
			DETECTO		67	84.8%				
		3	DETECTO	RS	11	13.9%				
		4	DETECTO	RS	1	1.3%				
		5	DETECTO	RS	0	0.0%				
		6	DETECTO	RS	0	0.0%				
		7	DETECTO	RS	0	0.0%				
		8	DETECTO	RS	0	0.0%				
		T	OTAL			79				
		NET 2-SEC RE	CORDS WI	TH SORTS		292				
		2-SEC PERIOD	S WITH N	SORTS		17,328				
		AVG TIME BET	WEEN 2-SI	EC SORTS		120.7 sec				
						•				
1-GATE SO	ORTS	187	ACT_ND	NUMBER	SPEC_A		ACT_P		FREQX	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(Bq)	(#)		(kBq)
1	4	2.1%	-14000	12	-261		4000	41	11.1%	4
2	21.		-12000	7	-224		8000	178	48.0%	8
3	40	21.4%	-10000	16	-187		12000	56	15.1%	12
4	41	21.9%	-8000	49	-149		16000	28	7.5%	16
5	34	18.2%	-6000	111	-112		20000	13	3.5%	20
6	23	12.3%	-4000	274	-75		24000	6	1.6%	24
7	21	11.2%	-2000	344	-37		28000	4	1.1%	28
8	3	1.6%	0	455	0		32000	6	1.6%	32
TOTAL	187		2000	272	37		36000	4	1.1%	36
			4000	149	75		40000	1	0.3%	40
2-GATE SC	ORTS	184	6000	63	112		44000	5	1.3%	44
DETECTR	SORTS	FREQ%	8000	22	149		48000	9	2.4%	48
8			10000	11	187		52000	4	1.1%	52
9	12	6.5%	12000	2	224		56000	2	0.5%	56
10	27	14.7%	14000	1	261		60000	3	0.8%	60
11	44	23.9%	16000	0	299		64000	0	0.0%	64
12	36	19.6%	18000	0	336		68000	0	0.0%	68
13	32	17.4%	20000	0	373		72000	0	0.0%	72
14	26	14.1%	22000	0	410		76000	3	0.8%	76
15	7	3.8%	24000	0	448		80000	0	0.0%	80
TOTAL	184		26000	0	485		84000	1	0.3%	84
			>28000	0	0	>	84000	7	1.9%	>84
			TOTAL	1788			TOTAL	371		
SUMMARY 1	TOTALS									

#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

389

541

2.00 Empty belt

HOT PARTICLE EVENTS

MULTIPARTICLE EVENTS
DISTRIBUTED EVENTS

2-SEC COUNT PERIODS

2-SEC RECORDS WITH SORTS

3.00 Test (No process soil)

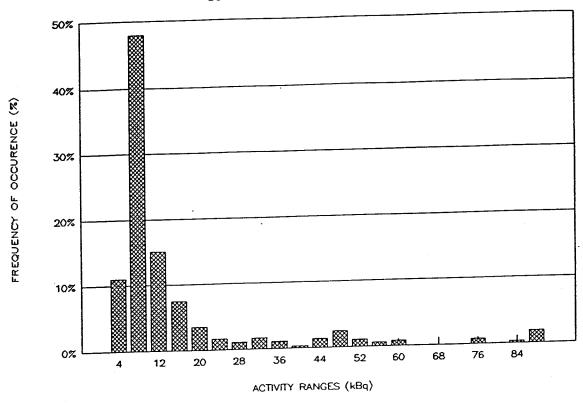
SORTS BY ONE GATE ONLY

SORTS BY TWO GATES

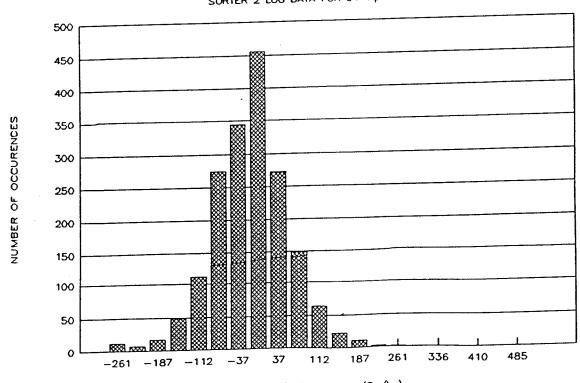
187

184

# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 01-Apr-93



# CLEAN SOIL SPECIFIC ACTIVITY SORTER 2 LOG DATA FOR 01-Apr-93



SPECIFIC ACTIVITY RANGES (Bq/kg)

A-232

SORTER 1 31-Mar-93			
AVERAGE BACKGROUND COUNT RATE	0.70 ±	0.02 c/sec	
SORTER SOIL DENSITY	1.15 tons		
GROUND SOIL DENSITY	1.65 tons	s/m³	
GKOOND SOIL DENSIII		CONTAMINATED	CLEAN
MASS TOTAL		1.01 tons	99.1 tons
MAXIMUM/SORT		6 kg	53.6 kg
MINIMUM/SORT		0.7 kg	47.5 kg
THE PERSON OF VOLUME PERSON	nv		99.0%
WEIGHT RECOVERY OR VOLUME RECOVE	KI	0.80 yd³	78.6 yd³ 79.4 yd³/day
EQUIVALENT SOIL-IN-GROUND			, ,
PARTICLE ACTIVITY (MAXIMUM ESTIM	ATE)		
TOTAL		14,635 kBq	
MAXIMUM/SORT		1,310 kBq	
MINIMUM/SORT		2.4 kBq	
DISPERSED + PARTICLE (REALISTIC	ESTIMATE) ACTIVITY	6,455 kBq	3,725 kBq
MAXIMUM/SORT		1024 kBq	14 kBq
MINIMUM/SORT		0 Bq	-8 kBq
SPECIFIC ACTIVITY		6,377 Bq/kg	38 Bq/kg
WORK HISTORY			
WORK DAY START	05:54 AM	WORK DAY END	05:30 PM
PLANT START-UP	05:54 AM	PLANT SHUT-DOWN	05:30 PM
START SOIL PROCESSING	06:30 AM	END SOIL PROCESSING	G 05:05 PM
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr
WORK HOURS		11.6 hr	
AVAILABLE HOURS		11.6 hr	
	OURS (total 20-sec record	is) 10.38 hr	
DOWN-TIME		1.22 hr	
TOTAL SYSTEM PAU	SE	0.62 hr	
NONAVAILABLE HOU	RS	0.0 hr	
START-UP		0.61 hr	
SHUT-DOWN		0.41 hr	
PLANT PERFORMANC	E	89.5%	
PRODUCTIVITY		89.5%	
TOTAL SOIL PROCESSING RECORDS (2	-SEC and 20-SEC)	2,821	
NONPROCESS RECORDS (Test, calibr		37	
20-SEC PROCESS RECORDS	•	1,869	
TOTAL SORT		0 MD>0 & MND=0	)
NO SORT		1,155 AD=0 & MD=0	& MND>0
SOME SORT		714 AD>0&0 <md<m< td=""><td>IDmax&amp;MND<mndmax< td=""></mndmax<></td></md<m<>	IDmax&MND <mndmax< td=""></mndmax<>
UNEXPLAINED RECO	RDS	. 0	
0 <ad<1kbq &="" md="">0</ad<1kbq>	5		UNEXPLAIN PAUSE
AD=0	& MD 0		TIME TIME
AD<0			07:52:11 05:54
ACT_P <5 kBq	319 33.5%	-	08:30:31 17:03

1

2.	SEC CO	JNT PERIODS				18,690				0	8:38:31
-	-	2-SEC RECORD	S WITH S	DRTS		952	(ACT_P	>0 kBq)		1	4:27:31
		2-SEC RECORD			IN >1 DE	TECTOR	<del></del>			15	5:12:11
			DETECTO		216		82.1%				
			DETECTO		40		15.2%				
			DETECTO		. 6		2.3%				
			DETECTO		1		0.4%				
			DETECTO	•	0		0.0%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
			OTAL			263					
		NET 2-SEC RE		TH SORTS		689					
		2-SEC PERIOD				18,001					
		AVG TIME BET				54.3	sec				
		AVG 11112 221									
1-GATE SC	פדפר	481	ACT_ND	NUMBER	SPEC A			ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREO%	(Bq)		(Bq/kg)			(Bq)	(#)		(kBq)
DETECTA	001110	,,,,	4-40	•							
1	7	1.5%	-14000	0	-261			4000	146	15.3%	4
2	47		-12000	2	-224			8000	414	43.5%	8
3	74	15.4%	-10000	10	-187			12000	140	14.7%	12
4	78	16.2%	-8000	13	-149			16000	65	6.8%	16
5	98	20.4%	-6000	14	-112			20000	39	4.1%	20
6	76	15.8%	-4000	66	-75			24000	29	3.0%	24
7	77	16.0%	-2000	149	-37			28000	26	2.7%	28
8	24	5.0%	0	309	0			32000	15	1.6%	32
TOTAL	481	2.00	2000	417	37			36000	14	1.5%	36
IOIAL	40.		4000	415	75			40000	5	0.5%	40
2-GATE SO	nrts	471	6000	296	112			44000	6	0.6%	44
DETECTR	SORTS	FREQ%	8000	145	149			48000	8	0.8%	48
8	00		10000	48	187			52000	5	0.5%	52
9	20	4.2%	12000	18	224			56000	5	0.5%	56
10	55	11.7%	14000	3	261			60000	7	0.7%	60
11	77	16.3%	16000	1	299			64000	6	0.6%	64
12	96	20.4%	18000	0	336			68000	1	0.1%	68
13	92	19.5%	20000	0	373			72000	2	0.2%	72
14	69	14.6%	22000	0	410			76000	3	0.3%	76
15	62		24000	0	448			80000	1	0.1%	80
TOTAL	471		26000	0	485			84000	1	0.1%	84
			>28000	0	0		>	84000	14	1.5%	>84
			TOTAL	1906				TOTAL	952		
SUMMARY '	TOTALS										
		ICLE EVENTS	940		SORTS BY	ONE G	ATE ONL	Υ	481		
•••									/71		

#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

572 0

2.00 Empty belt

MULTIPARTICLE EVENTS

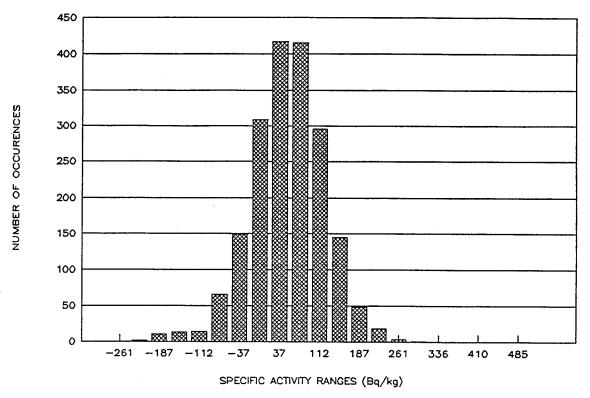
DISTRIBUTED EVENTS

3.00 Test (No process soil)

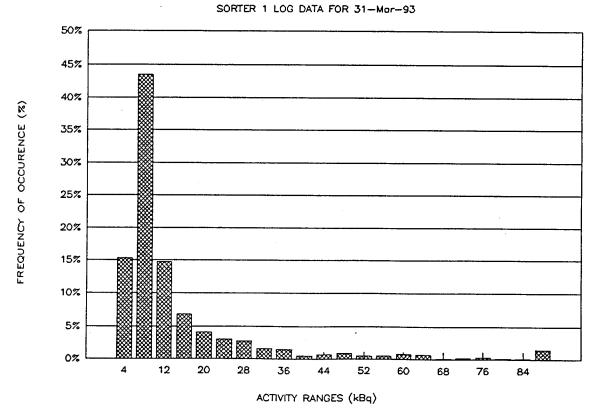
SORTS BY TWO GATES

471

SORTER 1 LOG DATA FOR 31-Mar-93



## JA SOIL CLEANUP PLANT HOT PARTICLES



SORTER 2 31-Mar-93	•							
AVERAGE BACKGROUND COUNT RATE	•	0.78	± 0	.04 c/sec				
SORTER SOIL DENSITY		1.15	tons/m³					
GROUND SOIL DENSITY		1.65	tons/m³					
				CONTA	MINATED	CLEAN		
MASS TOTAL				1.7	8 tons	89.0	tons	
MAXIMUM/SORT				56.	2 kg	53.6	kg	
MINIMUM/SORT				. 0.	7 kg	47.5	kg	
WEIGHT RECOVERY OR VOLUME RECOVERY								98.0%
EQUIVALENT SOIL-IN-GROUND				1.4	1 yd³	70.5	yd³	72.0 yd3/day
EGGIAVEEN 2015 IN GROOM					•			
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	<b>)</b>							
TOTAL	.•			10,99	0 kBq			
MAXIMUM/SORT				40	0 kBq			
MINIMUM/SORT				2.	7 kBq		·	
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTIV	YITY		6,62	3 kBq	7,992	kBq	
MAXIMUM/SORT				30	7 kBq	15	kBq	
MINIMUM/SORT				-1788	0 Bq	-6	kBq	
SPECIFIC ACTIVITY				3,71	5 Bq/kg	90	Bq/kg	
HOLK HISTORY								
WORK HISTORY WORK DAY START	05:54 AM			HORK	DAY END	05:30 PM		
PLANT START-UP	05:54 AM				SHUT-DOWN	05:30 PM		
START SOIL PROCESSING	06:33 AM				OIL PROCESSING	05:02 PM		
LUNCH START	11:30 AM				PERIOD	0.0		
WORK HOURS					11.6 hr			
AVAILABLE HOURS					11.6 hr			
ACTUAL PROCESS HOUR	S (total 20-	sec re	ecords)		9.41 hr			
DOWN-TIME					2.19 hr			
TOTAL SYSTEM PAUSE					1.57 hr			
NONAVAILABLE HOURS					0.0 hr			
START-UP					0.66 hr			
SHUT-DOWN					0.45 hr			
PLANT PERFORMANCE					81.1%			
PRODUCTIVITY					81.1%			
TOTAL SOIL PROCESSING RECORDS (2-SE	C and 20-SEC	:)			2,481			
NONPROCESS RECORDS (Test, calibrati					39			
20-SEC PROCESS RECORDS				1,69	4			
TOTAL SORT					4 MD>0 & MND=0			
NO SORT				58	1 AD=0 & MD=0 &	MND>0		
SOME SORT				1,10	9 AD>0&0 <md<mni< td=""><td>Omax&amp;MND<m< td=""><td>NDmax</td><td></td></m<></td></md<mni<>	Omax&MND <m< td=""><td>NDmax</td><td></td></m<>	NDmax	
UNEXPLAINED RECORDS	;				0			
0 <ad<1kbq &="" md="">0</ad<1kbq>	0					UNEXPLAI	Ņ I	PAUSE
AD=0 & 0	D 2					TIME		TIME
AD<0 & }	ID 2					10:24:11		05:54
ACT_P <5 kBq	264	33.5	¥.			10:39:55		09:39

Printed on 05/22/93 at 12:19:43 PM

1

10:43:40

10:34

16,940

	2-2EC CU	UNI PERIODS				10,740				,	0:43:40	10:34
		2-SEC RECORD	S WITH S	ORTS		<b>7</b> 87	(ACT_F	>0 kBq)		1	0:50:51	10:38
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR						10:39
		2	DETECTO	RS	170		87.6%					10:45
		3	DETECTO	RS	23		11.9%					
		4	DETECTO	RS	1		0.5%					
		5	DETECTO	RS	0		0.0%					
		6	DETECTO	RS	0		0.0%					
		7	DETECTO	RS	0		0.0%					
		8	DETECTO	RS	0		0.0%					
		1	OTAL			194						
		NET 2-SEC RE	CORDS WI	TH SORTS		593						
		2-SEC PERIOD	S WITH N	O SORTS		16,347	•					
		AVG TIME BET	WEEN 2-S	EC SORTS		57.1	sec					
1-GATE	SORTS	399	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P	
DETECT			(Bq)		(Bq/kg)			(Bq)	(#)		(kBq)	
1	10	2.5%	-14000	0	-261			4000	123	15.6%	4	
2			-12000	1	-224			8000		45.0%	8	
3			-10000	3				12000		12.5%	12	
4			-8000	16				16000	52		16	
5			-6000	12				20000	43		20	
6			-4000	33				24000	26	3.3%	24	
7			-2000	60	-37			28000	15	1.9%	28	
8	12	3.0%	0	125	0			32000	16	2.0%	32	
TOTAL	399		2000	192	37			36000	9	1.1%	36	
			4000	302	75			40000	5	0.6%	40	
2-GATE	SORTS	388	6000	349	112			44000	5	0.6%	44	
DETECT	R SORTS	FREQ%	8000	295	149			48000	3	0.4%	48	
8			10000	183	187			52000	4	0.5%	52	
9	23	5.9%	12000	120	224			56000	5	0.6%	56	
10	52	13.4%	14000	34	261			60000	4	0.5%	60	
11	67	17.3%	16000	8	299			64000	3	0.4%	64	
12	88	22.7%	18000	0	336			68000	5	0.6%	68	
13	80	20.6%	20000	0	373			72000	2	0.3%	72	
14	52	13.4%	22000	0	410			76000	0	0.0%	76	
15	26	6.7%	24000	0	448			80000	1	0.1%	80	
TOTAL	388		26000	0	485			84000	1	0.1%	84	
			>28000	0	0		3	84000	13	1.7%	>84	
			TOTAL	1733				TOTAL	787			
SUMMAR	Y TOTALS											
	HOT PART	ICLE EVENTS	802		SORTS BY	ONE G	ATE ONL	.Υ	399			
	MULTIPAR	TICLE EVENTS	1524		SORTS BY	TWO G	ATES		388			
	DISTRIBU	TED EVENTS	332									

REC CODE EXPLANATION

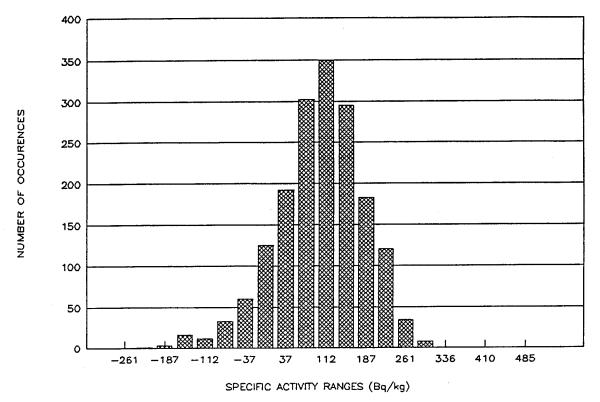
1.00 Source check (Soil on belt)

2.00 Empty belt

2-SEC COUNT PERIODS

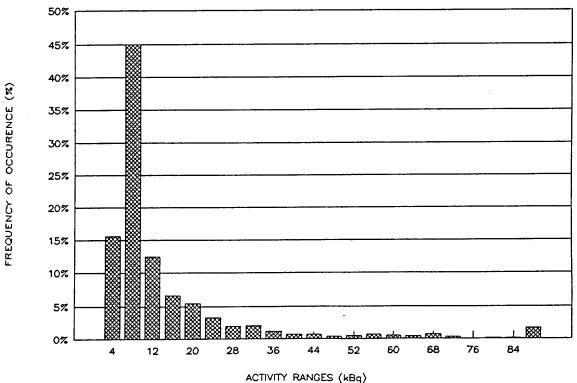
3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 31-Mor-93



## JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 31-Mor-93



ACTIVITY PARIGES (RBq)

SORTER 1 30-Mar-93										
AVERAGE BACKGROUND COUNT RATE		0.70	±	0.02	c/sec					
SORTER SOIL DENSITY		1.15	tons/m	3						
GROUND SOIL DENSITY		1.65	tons/m	3						
	_		• .		CONTAM	INATED	CLEAN			
MASS TOTAL					1.03	tons	98.6	tons		
MAXIMUM/SORT					8.7	kg .	53.6	kg		
MINIMUM/SORT					0.7	' kg	44.9	kg		
WEIGHT RECOVERY OR VOLUME RECOVERY									99.0%	
EQUIVALENT SOIL-IN-GROUND					0.82	. vq3	78.1	vd3	79.0 yd³/	/dav
ZADIVALLAN GOLL IN GROUND					****	,-		,-	,,,,	,
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	)									
TOTAL					13,604	kBq				
MAXIMUM/SORT					453	kBq .				
MINIMUM/SORT					2.4	kBq				
DISPERSED + PARTICLE (REALISTIC EST	(MATE) ACTIV	'I TY			6,093	kBa	3,873	kBa		
MAXIMUM/SORT	mail, adiii	•••			-	kBq	-	kBq		
MINIMUM/SORT						Bq		kBq		
SPECIFIC ACTIVITY						Bq/kg		Bq/kg		
0. 2011 10 1101111					-,					
WORK HISTORY										
WORK DAY START	06:00 AM				WORK D	AY END	05:30 PM			
PLANT START-UP	06:00 AM				PLANT	SHUT-DOWN	05:30 PM			
START SOIL PROCESSING	06:33 AM				END SO	IL PROCESSING	05:01 PM			
LUNCH START	11:30 AM				LUNCH	PERIOD	0.0	hr		
WORK HOURS						11.5 hr				
AVAILABLE HOURS						11.5 hr				
ACTUAL PROCESS HOURS	(total 20-	sec re	ecords)			10.33 hr				
DOWN-TIME						1.17 hr				
TOTAL SYSTEM PAUSE						0.55 hr				
NONAVAILABLE HOURS						0.0 hr				
START-UP						0.56 hr				
SHUT-DOWN						0.47 hr				
PLANT PERFORMANCE						89.8%				
PRODUCTIVITY						89.8%				•
TOTAL SOIL PROCESSING RECORDS (2-SEC	and 20-SEC	)				2,814				
NONPROCESS RECORDS (Test, calibratio						32				
20-SEC PROCESS RECORDS	•				1,859					
TOTAL SORT						MD>0 & MND=0				
NO SORT						AD=0 & MD=0 &	MND>0			
SOME SORT						AD>0&0 <md<< td=""><td></td><td>NDmax</td><td></td><td></td></md<<>		NDmax		
UNEXPLAINED RECORDS					0					
0 <ad<1kbq &="" md="">0</ad<1kbq>	0						UNEXPLAII	i 1	PAUSE	
AD=0 & ME	0			•			TIME		TIME	
AD<0 & MI	0						None		06:00	

ACT\_P <5 kBq

308 32.3%

18,590

2.	-SEC COL	JN1 PERIODS				10,370					
		2-SEC RECORD	S WITH SO	ORTS		. 955	(ACT_P	>0 kBq)			
		2-SEC RECORD	S WITH PO	OSITIVES	IN >1 DE	TECTOR					
		2	DETECTO	RS ,	208		80.9%				
		. 3	DETECTO	RS	41		16.0%				
		4	DETECTO	RS	7		2.7%				
		5	DETECTO	RS	1		0.4%				
		6	DETECTO	RS	0		0.0%				
		7	DETECTO	RS	0		0.0%				
		8	DETECTO	RS	0		0.0%				
		T	OTAL			. 257					
		NET 2-SEC RE	CORDS WI	TH SORTS		698					
		2-SEC PERIOD	S WITH NO	O SORTS		17,892					
		AVG TIME BET	WEEN 2-SI	EC SORTS		53.3	sec				•
1-GATE S	ODTE	483	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS		(Bq)		(Bq/kg)			(Bq)	(#)		(kBq)
DETECTA	SUKTS	, KLUA	(54)	ζ,	(54) (5)						•
1	6	1.2%	-14000	4	-261			4000	159	16.6%	4
2	33	6.8%	-12000	. 9	-224			8000	399	41.8%	8
3	61		-10000	10	-187			12000	136	14.2%	12
4	100		-8000	4	-149			16000	65	6.8%	16
5	112		-6000	10	-112			20000	46	4.8%	20
6	73		-4000	47	-75			24000	37	3.9%	24
7	73	15.1%	-2000	164	-37			28000	25	2.6%	28
8	25	5.2%	0	303	0			32000	15	1.6%	32
TOTAL	483		2000	403	37			36000	13	1.4%	36
			4000	420	75			40000	5	0.5%	40
2-GATE S	ORTS	472	6000	293	112			44000	5		44
DETECTR	SORTS	FREQ%	8000	148	149			48000	4	0.4%	48
8			10000	53	187			52000	5	0.5%	52
9	14	3.0%	12000	16	224			56000	7	0.7%	56
10	54	11.4%	14000	4	261			60000	5	0.5%	60
11	76	16.1%	16000	3	299			64000	4	0.4%	64
12	96	20.3%	18000	0	336			68000	4	0.4%	68
13	102	21.6%	20000	0	373			72000	2	0.2%	72
14	68	14.4%	22000	0	410			76000	0	0.0%	76
15	62	13.1%	24000	0	448			80000	1	0.1%	80
TOTAL	472		26000	0	485			84000	2		84
			>28000	0	0		>	84000	16	1.7%	>84
			TOTAL	1891				TOTAL	955		
SUMMARY	TOTALS										
H	OT PART	ICLE EVENTS	950		SORTS B			Υ.	483		
	<b></b>		FAF		COSTS D		ATEC		177		

## REC CODE EXPLANATION

1.00 Source check (Soil on belt)

595

0

2.00 Empty belt

MULTIPARTICLE EVENTS

DISTRIBUTED EVENTS

2-SEC COUNT PERIODS

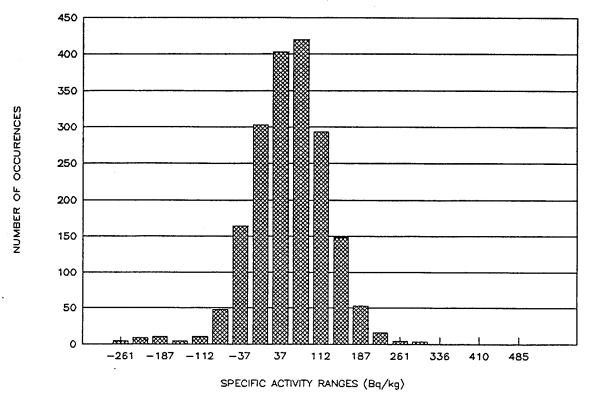
3.00 Test (No process soil)

Printed on 05/22/93 at 12:47:32 PM

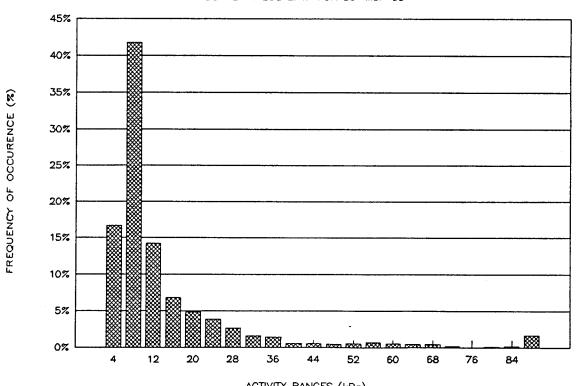
472

SORTS BY TWO GATES

SORTER 1 LOG DATA FOR 30-Mor-93



## JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 30-Mar-93



SORTER 2 30-Mar-93				
AVERAGE BACKGROUND COUNT RATE	0.79 ± 0.	03 c/sec		
SORTER SOIL DENSITY	1.15 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³		a. <b>a.</b>	
GROOMD SOIL DEMOTE		CONTAMINATED	CLEAN	
MASS TOTAL		1.31 tons	98.9 tons	
MAXIMUM/SORT		53.6 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	46.9 kg	
				98.7%
WEIGHT RECOVERY OR VOLUME RECOVER	RY		78.4 yd³	79.5 yd3/day
EQUIVALENT SOIL-IN-GROUND		1.04 yd <sup>3</sup>	70.4 70	, , ,
PARTICLE ACTIVITY (MAXIMUM ESTIM	ATE)	13,325 kBq		
TOTAL		290 kBq		
MAXIMUM/SORT		2.7 kBq		
MINIMUM/SORT		ret wad		
	TOTIVATES ACTIVITY	6,984 kBq	8,534 kBq	
DISPERSED + PARTICLE (REALISTIC	ESTIMATE) ACTIVITY	226 kBq	18 kBq	
MAXIMUM/SORT		0 Bq	-12 kBq	
MINIMUM/SORT		5,330 Bq/kg	86 Bq/ks	3
SPECIFIC ACTIVITY			•	
WORK HISTORY WORK DAY START	06:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	06:00 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:33 AM	END SOIL PROCESSING		
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr	
LONG!! OFFICE				
WORK HOURS		11.5 hr		
AVAILABLE HOURS		11.5 hr		
ACTUAL PROCESS H	OURS (total 20-sec records)	10.39 hr		
DOWN-TIME		1.11 hr	•	•
TOTAL SYSTEM PAU	SE	0.55 hr		
NONAVAILABLE HOU	RS	0.0 hr 0.56 hr		
START-UP		0.45 hr		
SHUT-DOWN		90.4%	•	
PLANT PERFORMANC	E .	90.4%		
PRODUCTIVITY		70.47		
	one 20-55C)	2,740		
TOTAL SOIL PROCESSING RECORDS (2		20		
NONPROCESS RECORDS (Test, calibr	ation, etc)	1,871		
20-SEC PROCESS RECORDS		1 MD>0 & MND=0		
TOTAL SORT		978 AD=0 & MD=0		
NO SORT		892 AD>0&0 <md<mn< td=""><td></td><td></td></md<mn<>		
SOME SORT	2 non	0		
UNEXPLAINED RECO			UNEXPLAIN	PAUSE
0 <ad<1kbq &="" md="">0 AD=0</ad<1kbq>	<u>.</u>		TIME	TIME
AD<0			12:53:03	06:00
ACT_P <5 kBq	230 26.5%			
No				

2-SEC COUNT PERIODS	18,	,710
2-SEC RECORDS WITH SORTS		869 (ACT_P >0 kBq)
2-SEC RECORDS WITH POSITIVES	IN >1 DETEC	CTOR
2 DETECTORS	190	83.7%
3 DETECTORS	29	12.8%
4 DETECTORS	6	2.6%
5 DETECTORS	2	0.9%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	- 0	0.0%
TOTAL		227
NET 2-SEC RECORDS WITH SORTS		642
2-SEC PERIODS WITH NO SORTS	18	,068
AVG TIME BETWEEN 2-SEC SORTS		58.3 sec

1-GATE S	ORTS	450	ACT_ND	NUMBER	SPEC_A	ACT_P		FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
								44 (4)	
1	15	3.3%	-14000	2	-261	4000	101	11.6%	4
2	63	14.0%	-12000	5	-224	8000	376	43.3%	8
3	84	18.7%	-10000	12	-187	12000	136	15.7%	12
4	109	24.2%	-8000	6	-149	16000	76	8.7%	16
5	84	18.7%	-6000	4	-112	20000	37		20
6	60	13.3%	-4000	16	-75	24000	35	4.0%	24
7	32	7.1%	-2000	46	-37	28000	14	1.6%	28
8	3	0.7%	0	140	0	32000	13	1.5%	32
TOTAL	450		2000	273	37	36000	15	1.7%	36
			4000	345	75	40000	4	0.5%	40
2-GATE S	ORTS	419	6000	408	112	44000	7		44
DETECTR	SORTS	FREQ%	8000	297	149	48000	5	0.6%	48
8			10000	164	187	52000	8		52
9	<b>3</b> 5	8.4%	12000	105	224	56000	4	0.5%	56
10	60	14.3%	14000	41	261	60000	6	0.7%	60
11	94	22.4%	16000	19	299	64000	3	0.3%	64
12	100	23.9%	18000	7	<b>33</b> 6	68000	1	0.1%	68
13	69	16.5%	20000	1	373	72000	2	0.2%	72
14	50	11.9%	22000	0	410	76000	2	0.2%	76
15	11	2.6%	24000	0	448	80000	0	0.0%	80
TOTAL	419		26000	0	485	84000	0	0.0%	84
			>28000	0	0	>84000	24	2.8%	>84
			TOTAL	1891		TOTAL	869		
SUMMARY	TOTALS								
	OT PARTIC	LE EVENTS	863		SORTS BY	ONE GATE ONLY	450		
		CLE EVENTS	1015		SORTS BY	TWO GATES	419		
D	ISTRIBUTE	EVENTS	76						

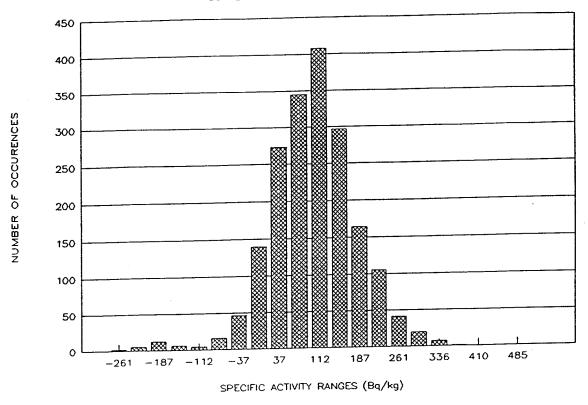
### REC CODE EXPLANATION

1.00 Source check (soil on belt)

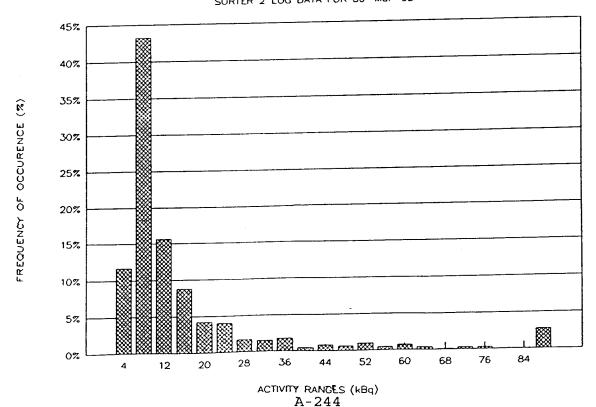
2.00 Empty belt

3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 30-Mor-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 30-MOT-93



SORTER 1 29-Mar-93				
	0.74 . 0	0/ -/		
AVERAGE BACKGROUND COUNT RATE	0.71 ± 0. 1.15 tons/m³	04 c/sec		
SORTER SOIL DENSITY	1.65 tons/m <sup>3</sup>			
GROUND SOIL DENSITY	1.03 Consym	CONTAMINATED	CLEAN	
MASS TOTAL		1.61 tons	85.3 tons	
MAXIMUM/SORT		56.2 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	42.8 kg	
manion, con				
WEIGHT RECOVERY OR VOLUME RECOVERY				98.1%
EQUIVALENT SOIL-IN-GROUND		1.28 yd³	67.6 yd <sup>3</sup>	68.9 yd³/day
PARTICLE ACTIVITY (MAXIMUM ESTIMATI	= 1			
TOTAL	-7	12,988 kBq		
MAXIMUM/SORT		1,119 kBq		
MINIMUM/SORT		2.3 kBq		
,		•		
DISPERSED + PARTICLE (REALISTIC ES	TIMATE) ACTIVITY	6,109 kBq	1,426 kBq	
MAXIMUM/SORT		978 kBq	18 kBq	
MINIMUM/SORT		-641 Bq	-13 kBq	
SPECIFIC ACTIVITY		3,794 Bq/kg	17 Bq/kg	1
WORK HISTORY				
WORK DAY START	05:49 AM	WORK DAY END	05:30 PM	
PLANT START-UP	05:49 AM	PLANT SHUT-DOWN	05:04 PM	
START SOIL PROCESSING	06:22 AM	END SOIL PROCESSING	05:02 PM	
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr	
WORK HOURS		11.2 hr		
AVAILABLE HOURS		10.8 hr		
	RS (total 20-sec records)	9.01 hr		
DOWN-TIME		1.74 hr		
TOTAL SYSTEM PAUSE		2.08 hr		
NONAVAILABLE HOURS		0.4 hr		
START-UP		0.55 hr		
SHUT-DOWN		0.02 hr		
PLANT PERFORMANCE		83.8%		
PRODUCTIVITY		80.6%		
TOTAL SOIL PROCESSING RECORDS (2-SI	EC and 20-SEC)	2,483		
NONPROCESS RECORDS (Test, calibrat	ion, etc)	<b>3</b> 5		
20-SEC PROCESS RECORDS		1,622		
TOTAL SORT		14 MD>0 & MND=0		
NO SORT		1,114 AD=0 & MD=0 &	MND>0	
SOME SORT		494 AD>0&0 <md<mnd< td=""><td>max&amp;MND<mndmax< td=""><td></td></mndmax<></td></md<mnd<>	max&MND <mndmax< td=""><td></td></mndmax<>	
UNEXPLAINED RECORDS	5	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	1	,	UNEXPLAIN	PAUSE
AD=0 & 1	4D 0		TIME	TIME
AD<0 & P	1D 1		12:47:40	05:50
ACT_P <5 kBq	249 28.9%		16:12:40	10:13

File S1JA0329.WR1

Printed on 03/30/93 at 01:31:57 PM

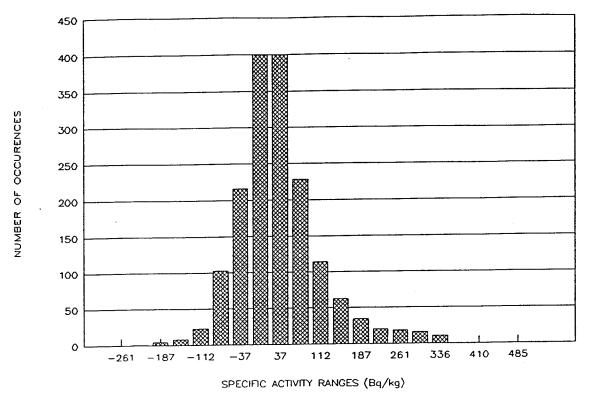
2		16,220										
2-SEC COUNT PERIODS 2-SEC RECORDS WITH SORTS						861	(ACT_P	>0 kBq)				
2-SEC RECORDS WITH POSITIVES					IN >1 DE	TECTOR						
			DETECTO		209		84.6%					
			DETECTORS		33		13.4%					
			DETECTO		4		1.6%					
			DETECTORS		1		0.4%					
		6	DETECTO	RS	0		0.0%					
7			DETECTORS		0		0.0%					
		8	DETECTORS		0		0.0%					
		T	OTAL			247						
		NET 2-SEC RE	CORDS WI	TH SORTS		614						
			S WITH NO SORTS		15,606							
AVG TIME BET					52.8		sec					
1-GATE S	SORTS	429	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P	
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)	
1	5	1.2%	-14000	0	-261			4000	117	13.6%	4	
2	20	4.7%	-12000	1	-224			8000	372		8	
3	45	10.5%	-10000	4	-187			12000	139		12	
4	. 86	20.0%	-8000	8	-149			16000	60	7.0%	16	
5	100	23.3%	-6000	23	-112			20000	41	4.8%	20	
6	82	19.1%	-4000	103	-75			24000	22		24	
7	71	16.6%	-2000	216	-37			28000	20		28	
8	20	4.7%	0	400	0			32000	21		32	
TOTAL	429		2000	400				36000	8		36	
			4000	228				40000	12		40	
2-GATE SORTS		432	6000	114	112			44000	6		44	
DETECTR	SORTS	FREQ%	8000	62				48000	5		48	
8			10000	34	187			52000	4		52	
9	11	2.5%	12000	20				56000	9		56	
10	33	7.6%	14000	18				60000	4		60	
11	71	16.4%	16000	16				64000	2		64	
12	89	20.6%	18000	10				68000	2		68 73	
13	100	23.1%	20000	0				72000	0		72 76	
14	77	17.8%	22000	0				76000	3			
15	51	11.8%	24000	0				80000	1		80 8/	
TOTAL	432		26000	0				84000	10		84 >84	
			>28000	0			,	84000	10	1.2%	<b>704</b>	
			TOTAL	1657				TOTAL	861			
SUMMARY TOTALS					CODEC 5"	מער ה	ATE ON	v	429			
HOT PARTICLE EVENTS			840		SORTS BY			. •	432			
MULTIPARTICLE EVENTS			507		POK 12 BI	IWU G	MIES		772			
(	DISTRIBU	TED EVENTS	1056									

## REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

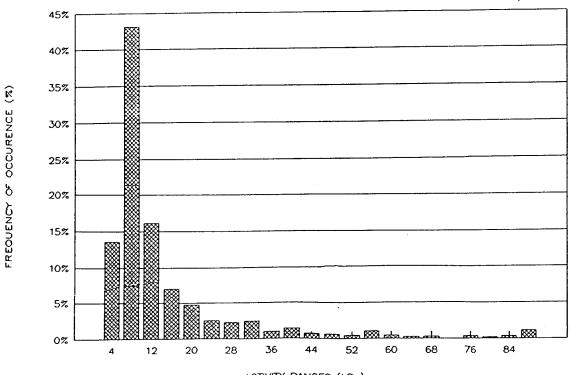
10:24 10:39 10:58

SORTER 1 LOG DATA FOR 29-Mar-93



# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 29-Mor-93



ACTIVITY RANGES (kBq)

A-247

SORTER 2 29-Mar-93						
AVERAGE BACKGROUND COUNT RATE	ı	0.79	± 0.0	4 c/sec		
SORTER SOIL DENSITY		1.15	tons/m³			
GROUND SOIL DENSITY		1.65	tons/m³		CLEAN	
GROOMD SOIL DEMAN				CONTAMINATED	CLEAN	•
MASS TOTAL				2.32 tons	74.3 ton	S
MAXIMUM/SORT				56.2 kg	53.6 kg 41.5 kg	
MINIMUM/SORT				0.7 kg	41.5 Kg	
						97.0%
WEIGHT RECOVERY OR VOLUME RECOVERY				1.84 yd³	58.9 yd³	60.8 yd3/day
EQUIVALENT SOIL-IN-GROUND				·		
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	)					
TOTAL				23,059 kBq		
MAXIMUM/SORT				4,264 kBq		
MINIMUM/SORT				2.7 k8q		
		. ~		10,787 kBq	4,602 kBq	
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACIIVI	HY		3501 kBq	20 kBd	
MAXIMUM/SORT				0 Bq	-14 kBc	
MINIMUM/SORT				4.643 Bq/kg	62 Bq/	kg
SPECIFIC ACTIVITY				1,010 0410		
WORK HISTORY						
WORK DAY START	05:49 AM			WORK DAY END	05:30 PM	
PLANT START-UP	05:49 AM			PLANT SHUT-DOWN	05:04 PM	
START SOIL PROCESSING	06:22 AM			END SOIL PROCESSING	05:03 PM 0.5 hr	
LUNCH START	11:30 AM			LUNCH PERIOD	0.5 111	
NOOK HOURS				11.2 hr		
WORK HOURS AVAILABLE HOURS				10.8 hr		
ACTUAL PROCESS HOU	RS (total 20-s	sec re	ecords)	7.94 hr		
DOWN-TIME	•			2.81 hr		
TOTAL SYSTEM PAUSE				3.11 hr		
NONAVAILABLE HOURS				0.4 hr		
START-UP				0.55 hr		
SHUT - DOWN				0.01 hr		
PLANT PERFORMANCE				73.9%		
PRODUCTIVITY				71_0%		
	30 050	,		2,168		
TOTAL SOIL PROCESSING RECORDS (2-S	EC and 20-SEC	,		59		
NONPROCESS RECORDS (Test, calibrat	ion, etc)			1,430		
20-SEC PROCESS RECORDS				27 MD>0 & MND=0		
TOTAL SORT				834 AD=0 & MD=0 &	& MND>0	
NO SORT				569 AD>0&0 <md<mn(< td=""><td>Dmax&amp;MND<mndm< td=""><td>эx</td></mndm<></td></md<mn(<>	Dmax&MND <mndm< td=""><td>эx</td></mndm<>	эx
UNEXPLAINED RECORD	S			0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	0				UNEXPLAIN	PAUSE
AD=0 &					TIME	TIME
AD<0 8					None	05:50
ACT_P <5 kBq	204	27.6	X.			10:13

2-	SEC COL	JNT PERIODS				14,300						
		2-SEC RECORD	S WITH S	ORTS		738	(ACT_P	>0 kBq)				
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR						
		2	DETECTO	RS	167		77.0%					
		3	DETECTO	RS	33		15.2%					
		4	DETECTO	RS	13		6.0%					
		5	DETECTO	RS	4		1.8%					
		6	DETECTO	RS	0		0.0%					
		7	DETECTO	RS	0		0.0%					
		8	DETECTO	RS	0		0.0%					
		т	OTAL			217						
		NET 2-SEC RE	CORDS WI	TH SORTS		521						
		2-SEC PERIOD	S WITH N	O SORTS		13,779						
		AVG TIME BET	WEEN 2-S	EC SORTS		54.9	sec					
1-GATE SC	ORTS	377	ACT_ND	NUMBER	SPEC_A			ACT_P		FREQ%	ACT_P	
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)	
									0.4	44 24	,	
1	13	3.4%	-14000	1	-261			4000	84	11.2%	4	
2	55	14.3%	-12000	2	-224			8000	317		8	
3	99	25.8%	-10000	3	-187			12000	117	15.6%	12	
4	89	23.2%	-8000	6	-149			16000	64	8.5%	16 20	
5	74	19.3%	-6000	6	-112			20000	35	4.7%		
6	32	8.3%	-4000	23	-75			24000	25	3.3%	24	
7	18	4.7%	-2000	78	-37			28000	16	2.1%	28 32	
8	4	1.0%	0	191	0			32000	12	1.6%	36	
TOTAL	384		2000	294	37			36000	11 6	1.5% 0.8%	40	
			4000	315	75			40000	4	0.5%	44	
2-GATE SC		361	6000	232	112			44000		0.7%	48	
DETECTR	SORTS	FREQ%	8000	152	149			48000	5 3	0.4%	52	
8			10000	76	187			52000	3		56	
9	28	7.7%	12000	34	224			56000	5 6	0.8%	60	
10	71	19.5%	14000	29	261			60000	7		64	
11	97	26.6%	16000	21	299			64000	3	0.4%	68	
12	84	23.0%	18000	9	336			68000	1	0.4%	72	
13	54	14.8%	20000	6	373			72000 76000	1	0.1%	76	
14	22	6.0%	22000	0	410				2	0.1%	80	
15	9	2.5%	24000	0	448			80000 84000	1	0.1%	84	
TOTAL	365		26000	0	485				26	3.5%	>84	
			>28000	0	0			84000 TOTAL	749	3.34	704	
			TOTAL	1478				TOTAL	147			

# REC CODE EXPLANATION

SUMMARY TOTALS

1.00 Source check (Soil on belt)

692

662

2108

2.00 Empty belt

HOT PARTICLE EVENTS

DISTRIBUTED EVENTS

MULTIPARTICLE EVENTS

3.00 Test (No process soil)

10:24 10:29 10:34 10:35 10:41 10:44 12:07 12:08 12:53 12:59 13:00

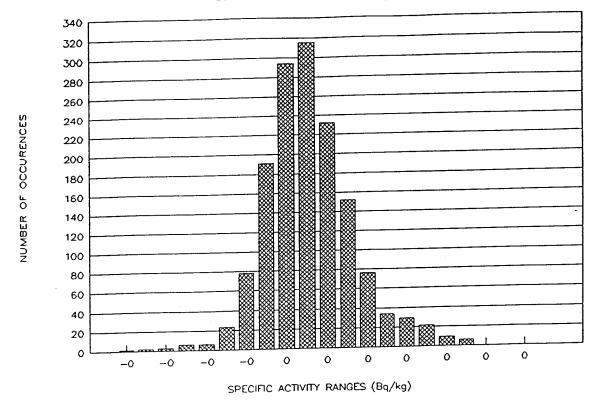
SORTS BY ONE GATE ONLY

SORTS BY TWO GATES

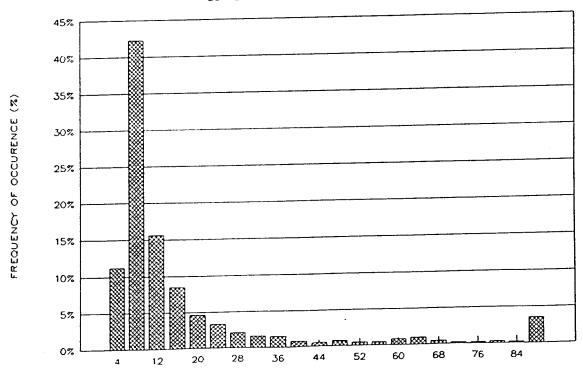
377

361

SORTER 2 LOG DATA FOR 29-Mar-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 29-MOT-93



ACTIVITY RANGES (kBq)

SORTER 1	27-Mar-93									
AVERAGE BACKGROU	ND COUNT RATE		0.70	±	0.03	c/sec				÷
SORTER SOIL DENS			1.15	tons/m	2					
GROUND SOIL DENS			1.65	tons/m	3					
aroons core						CONTAN	INATED	CLEAN		
MASS TOTAL						1.68	tons		tons	
MAXIMUM/S	ORT					56.2	kg	53.6		
MINIMUM/S	ORT					0.7	kg	48.9	kg	
	on volume pecovery									97.6%
	OR VOLUME RECOVERY					1.33	vd³	53.8	yd³	55.1 yd3/da
EQUIVALENT SOIL-	IN-GROUND						,-			
PARTICLE ACTIVIT	Y (MAXIMUM ESTIMATE)	<b>)</b>								
TOTAL	• • • • • • • • • • • • • • • • • • • •					11,500	kBq			
MAXIMUM/S	ORT					307	kBq	•		
MINIMUM/S						2.4	kBq			
marion/5	<del></del>									
DISPERSED + PART	ICLE (REALISTIC EST	MATE) ACTIV	ITY			5,568	kBq	4,338	-	
MAXIMUM/S						242	kBq		kBq	
MINIMUM/S						0	Bq		kBq	
SPECIFIC						3,311	Bq/kg	64	Bq/kg	t
JORK HISTORY								05:30 PM		
WORK DAY		05:56 AM				WORK D		02:30 PM		
PLANT STA	RT-UP	05:56 AM					SHUT-DOWN			
START SOI	L PROCESSING	06:40 AM					IL PROCESSING	0.0		
LUNCH STA	RT	11:30 AM				LUNCH	PERIOD	0.0	""	
,	WORK HOURS						11.6 hr			
	AVAILABLE HOURS						8.6 hr			
	ACTUAL PROCESS HOURS	Ctotal 20-	sec re	ecords)			7.21 hr			
	DOWN-TIME	•					1.36 hr			· •
	TOTAL SYSTEM PAUSE						0.85 hr			
	NONAVAILABLE HOURS						3.0 hr			
	START-UP						0.74 hr			
	SHUT-DOWN						0.48 hr			
	PLANT PERFORMANCE						84.2%			
	PRODUCTIVITY						62.3%			
	notus present (3 65)	- and 30-ccc	٠,				2,081			
	SSING RECORDS (2-SE		.,				12			
	DS (Test, calibratio	on, etc)				1,298				
	OCESS RECORDS						MD>0 & MND=0			
	TOTAL SORT						AD=0 & MD=0 &	MND>0		
	NO SORT						AD>0&0 <md<mni< td=""><td></td><td>NDmax</td><td></td></md<mni<>		NDmax	
	SOME SORT					0				
						·		UNEXPLAT	N	PAUSE
;	UNEXPLAINED RECORDS	n						UNCAPLAI		PAUSE
;	0 <ad<1kbq &="" md="">0</ad<1kbq>	0								TIME
;		0			,			TIME		

2	2-SEC COUI	NT PERIODS			_	12,980						06:53
		2-SEC RECORD	S WITH SO	ORTS		783	(ACT_F	>0 kBq)				06:55
		2-SEC RECORD	S WITH PO	OSITIVES	IN >1 DE	TECTOR						06:56
			DETECTOR		174		80.2%					
		3	DETECTOR	RS	33		15.2%					
			DETECTOR		10		4.6%					
		5	DETECTO	RS	0		0.0%					
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
		8	DETECTO	R\$	0		0.0%					
			OTAL			217						
	I	NET 2-SEC RE		TH SORTS		566						
		2-SEC PERIOD				12,414						
		AVG TIME BET				45.9	sec					
	•	Ava Tric oct										
1 0175	CODIC	393	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P	
1-GATE	SORTS	FREQ%	(Bq)		(Bq/kg)			(Bq)	(#)		(kBq)	
DETECTR	SUKTS	: REGA	(04)	• •	• •							
	11	2.8%	-14000	0	-261			4000	138	17.6%	4	
1	50	12.7%	-12000	0	-224			8000	285	36.4%	8	
. 2	48	12.2%	-10000	4	-187			12000	143	18.3%	12	
	68	17.3%	-8000	1	-149			16000	64	8.2%	16	
4 5	79	20.1%	-6000	7				20000	25	3.2%	20	
	65	16.5%	-4000	20	-75			24000	20	2.6%	24	
6 7	57	14.5%	-2000	72	-37			28000	23	2.9%	28	
8	15	3.8%	0	<b>16</b> 6	0			32000	11	1.4%	32	
	393	310%	2000	251	37			36000	5	0.6%	36	
TOTAL	373		4000	260	<b>7</b> 5			40000	11	1.4%	40	
2-GATE	CUBIC	390	6000	227	112			44000	5	0.6%	44	
DETECTR		FREQ%	8000	140	149			48000	7		48	
	301.13	111227	10000	84	187			52000	7	0.9%	52	
8 9	31	7.9%	12000	40	224			56000	6	0.8%	56	
	50	12.8%	14000	21				60000	3	0.4%	60	
10	63	16.2%	16000	10				64000	2	0.3%	64	
11	67	17.2%	18000	6	336			68000	4	0.5%	68	
12	70	17.9%	20000	1	373			72000	1	0.1%	72	
13		19.7%	22000	0	410			76000	1	0.1%	76	
14 15	77 32	8.2%	24000	0				80000	2	0.3%	80	
	390	0.2~	26000	0	485			84000	2	0.3%	84	
TOTAL	370		>28000	0	0		:	>84000	18	2.3%	>84	
			TOTAL	1310				TOTAL	783			
SUMMARY	2 IATOT											
		CLE EVENTS	790		SORTS BY	ONE G	ATE ON	LY	393			
		ICLE EVENTS	541		SORTS BY	TWO G	ATES		390			
		ED EVENTS	1180		-							
	P. 12 1 V 1 DO I											

#### REC CODE EXPLANATION

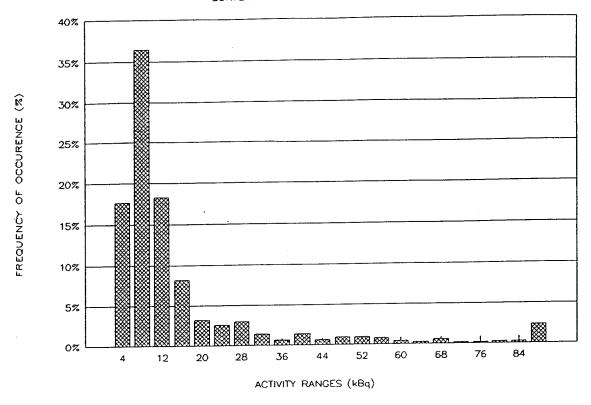
1.00 Source check (Soil on belt)

2.00 Empty belt

3.00 Test (No process soil)

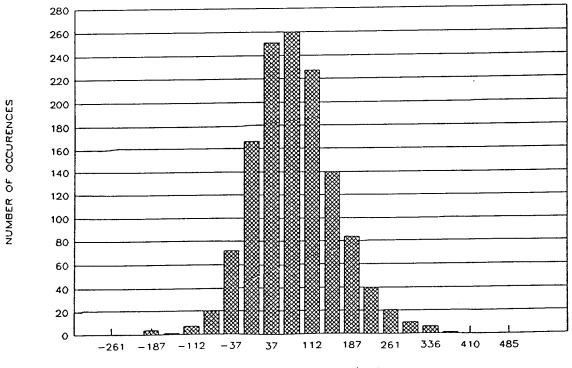
# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 27-Mar-93



# CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 27-Mar-93



SPECIFIC ACTIVITY RANGES (Bq/kg)

SORTER 2 27-Mar-93				
AVERAGE BACKGROUND COUNT RATE	0.76 ± 0.0	)5 c/sec		
SORTER SOIL DENSITY	1.15 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³			
drooms coll say		CONTAMINATED	CLEAN	
MASS TOTAL		2.04 tons	67.9 tons	
MAXIMUM/SORT		56.2 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	46.9 kg	
				97.1%
WEIGHT RECOVERY OR VOLUME RECOVERY		1.62 yd3	53.8 yd³	55.4 yd3/day
EQUIVALENT SOIL-IN-GROUND		1100 /4	•	
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	:)		•	
TOTAL		11,094 kBq		
MAXIMUM/SORT		842 kBq		
MINIMUM/SORT		2.2 kBq		
		6,374 kBq	7,411 kBq	
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTIVITY	693 kBq	19 kBq	
MAXIMUM/SORT		0 Bq	-7 kBq	
MINIMUM/SORT		3,123 Bq/kg	109 Bq/ks	9
SPECIFIC ACTIVITY		57.00 04.13		
WORK HISTORY				
WORK DAY START	05:56 AM	WORK DAY END	05:30 PM	
PLANT START-UP	05:56 AM	PLANT SHUT-DOWN	02:30 PM	
START SOIL PROCESSING	06:39 AM	END SOIL PROCESSING	02:01 PM 0.0 hr	
LUNCH START	11:30 AM	LUNCH PERIOO	0.0 111	
WORK HOURS		11.6 hr		
AVAILABLE HOURS		8.6 hr		
	RS (total 20-sec records)	7.25 hr		
DOWN-TIME		1.32 hr		
TOTAL SYSTEM PAUSE		0.85 hr		
NONAVAILABLE HOURS		3.0 hr		
START-UP		0.72 hr		
SHUT-DOWN		0.47 hr		
PLANT PERFORMANCE		84.6%		
PRODUCTIVITY		62.7%		
TOTAL SOIL PROCESSING RECORDS (2-SE	C and 20-SEC)	1,876		
NONPROCESS RECORDS (Test, calibrat		3		
20-SEC PROCESS RECORDS		1,305		
TOTAL SORT		23 MD>0 & MND=0		
NO SORT		696 AD=0 & MD=0 8		
SOME SORT		586 AD>0&0 4ND 4NN	Max&MND MND Max	
UNEXPLAINED RECORDS	<b>S</b> .	0		DAHCE
0 <ad<1kbq &="" mo="">0</ad<1kbq>	0		UNEXPLAIN	PAUSE
AD=0 & 1	ю 0		TIME	TIME 05:56
AD<0 & 1			None	06:47
ACT_P <5 kBq	161 28.2%			VV1

File S2JA0327.WR1

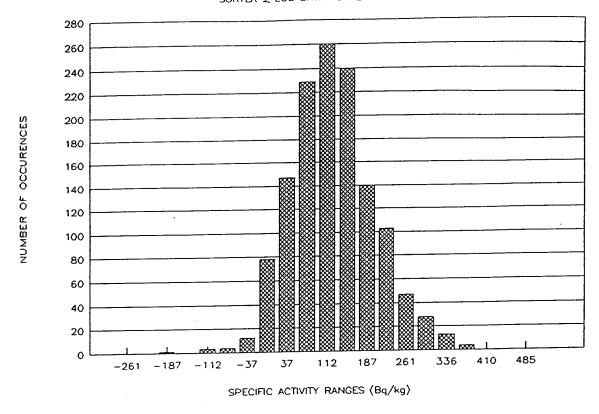
Printed on 05/22/93 at 11:46:14 AM

	2-SEC CO	JNT PERIODS				13,050					06:55
•		2-SEC RECORD	S WITH S	ORTS		571	(ACT_P >0 kBq)				06:56
		2-SEC RECORD			IN >1 DE	TECTOR	_				
			DETECTO		134		82.7%				
			DETECTO		23		14.2%				
		4	DETECTO	RS	4		2.5%				
		5	DETECTO	RS	1		0.6%				
		6	DETECTO	RS	0		0.0%				
		7	DETECTO	RS	0		0.0%				
		8	DETECTO	RS	0		0.0%				
		Т	OTAL			162					
		NET 2-SEC RE	CORDS WI	TH SORTS		409					
		2-SEC PERIOD	S WITH N	O SORTS		12,641					
		AVG TIME BET	WEEN 2-S	EC SORTS		63.8	sec				
1-GATE	21902	297	ACT_ND	NUMBER	SPEC_A		ACT_P	SORT	FREQX	ACT_P	
DETECTR		FREQ%	(Bq)		(Bq/kg)		(Bq)	(#)		(kBq)	
OCILOIR	500.13		,-4,	,			•				
1	11	3.7%	-14000	0	-261		4000	76	13.3%	4	
2	42	14.1%	-12000	0	-224		8000	262	45.9%	8	
3	48	16.2%	-10000	, 1	-187		12000	72	12.6%	12	
4	<b>6</b> 6	22.2%	-8000	0	-149		16000	38	6.7%	16	
5	62	20.9%	-6000	3	-112		20000	26	4.6%	20	
6	43	14.5%	-4000	4	-75		24000	19	3.3%	24	
7	21	7.1%	-2000	12	-37		28000	8	1.4%	28	
8	4	1.3%	0	78	0		32000	14	2.5%	32	
TOTAL	297		2000	147	37		36000	9	1.6%	36	
			4000	229	75		40000	4	0.7%	40	
2-GATE	SORTS	274	6000	260			44000	8	1.4%	44	
DETECTR	SORTS	FREQ%	8000	239			48000	3	0.5%	48	
8			10000	140	187		52000	5	0.9%	52 57	
9	23	8.4%	12000	103	224		56000	3	0.5%	56	
10	35	12.8%	14000	47			60000	3	0.5%	60	
11	48	17.5%	16000	28	299		64000	2	0.4%	64 68	
12	63	23.0%	18000	13	336		68000	0	0.0%	72	
13	55	20.1%	20000	4	373		72000	1	0.2%	76	
14	<b>3</b> 6	13.1%	22000	0	410		76000	1		80	
15	14	5.1%	24000	0	448		80000	1	0.2%	84	
TOTAL	274		26000	0	485		84000 >84000	15	2.6%	>84 >84	
			>28000	1700	0		>84000 TOTAL	571	2.0%	-04	
	TOTA: 5		TOTAL	1308			TOTAL	J1 1			
SUMMARY		CLC CVCUTC	EEO		SORTS BY	ONE C	ATE ONLY	297			
		CLE EVENTS	559 476		SORTS BY			274			
		ICLE EVENTS	674 1810		3UR 13 81		1123	_, ~			
•	1791KTRO)	'ED EVENTS	1010								

#### REC CODE EXPLANATION

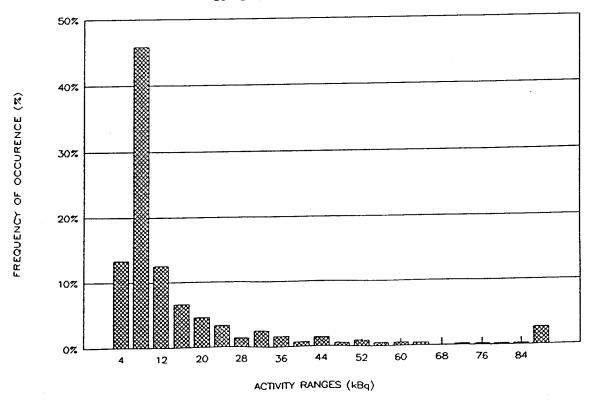
- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 27-Mar-93



# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 27-Mar-93



SORTER 1 26-Mar-93					
AVERAGE BACKGROUND COUNT RATE		0.70 ±	0.02 c/sec		
SORTER SOIL DENSITY		1.15 tons/	m³		
GROUND SOIL DENSITY		1.65 tons/	m³		
			CONTAMINATED	CLEAN	
MASS TOTAL			2.70 tons	87.4 to	ns
MÁXIHUM/SORT			56.2 kg	53.6 kg	
MINIMUM/SORT			0.7 kg	41.5 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY					97.0%
EQUIVALENT SOIL-IN-GROUND			2.14 yd³	69.3 yd <sup>3</sup>	71.4 yd³/day
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	E)				
TOTAL	•		19,825 kBq		
MAXIMUM/SORT			327 kBq		
HINIMUM/SORT			1.9 kBq		
DISPERSED + PARTICLE (REALISTIC ES	TIMATE) ACTIV	ITY	9,559 kBq	4,803 kBd	1
MAXIMUM/SORT			249 kBq	18 kBc	1
MINIMUM/SORT			0 Bq	-15 kBd	
SPECIFIC ACTIVITY			3,545 Bq/kg	55 Bq/	kg
WORK HISTORY					
WORK DAY START	05:51 AM		WORK DAY END	05:30 PM	
PLANT START-UP	05:51 AM		PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:18 AM		END SOIL PROCESSING	04:56 PM	
LUNCH START	11:30 AM		LUNCH PERIOD	0.0 hr	
WORK HOURS			11.6 hr		
AVAILABLE HOURS			11.6 hr		
ACTUAL PROCESS HOU	RS (total 20-	sec records			
DOWN-TIME			2.31 hr		
TOTAL SYSTEM PAUSE			1.72 hr		
NONAVAILABLE HOURS			0.0 hr		
START-UP			0.46 hr		
SHUT-DOWN			0.55 hr		
PLANT PERFORMANCE			80.2%		
PRODUCTIVITY			80.2%		
TOTAL SOIL PROCESSING RECORDS (2-SE		)	3,051		
NONPROCESS RECORDS (Test, calibrat	ion, etc)		14		
20-SEC PROCESS RECORDS			1,681		
TOTAL SORT			26 MD>0 & MND=0		
NO SORT			940 AD=0 & MD=0		
SOME SORT			715 AD>0&0 4N	UMAXAMNU SMNUMA	X
UNEXPLAINED RECORDS			0	AMICVOLATA	DAUSE
0 <ad<1kbq &="" md="">0</ad<1kbq>	2		•	UNEXPLAIN	PAUSE
AD=0 & 1				TIME	TIME 05:51
A D < 0 & A		70.00		12:51:57	11:27
ACT_P <5 kBq	441	32.2%		13:50:17	1 t + C- T

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1

2	כבר בחווו	T PERIODS				16,810						12:46
2		-SEC RECORD	S HITH S	DRTS			(ACT_P	>0 kBq)				
		-SEC RECORD			IN >1 DE							
			DETECTO		329		82.5%					
			DETECTO		59		14.8%					
			DETECTO		9		2.3%			,		
			DETECTO		2		0.5%					
			DETECTO		0		0.0%					
		7	DETECTO	RS	0		0.0%					
		8	DETECTO	RS	0		0.0%					
		Ţ	OTAL			399						
	N	ET 2-SEC RE	CORDS WI	TH SORTS		971						
	2	-SEC PERIOD	S WITH N	SORTS		15,839						
	A	VG TIME BET	WEEN 2-SI	EC SORTS		34.6	sec					
								CT D	COPT	FREQ%	ACT_P	
1-GATE S	ORTS	701	ACT_ND		SPEC_A		,	CT_P	(#)	INCHA	(kBq)	
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		( 4)	
			44000	1	-261			4000	230	16.8%	4	
1	13	1.9%	-14000	1	-224			8000	550		8	
2	74	10.6%	-12000 -10000	2	-187		1	12000	204	14.9%	12	
3	108	15.4%	-8000	3	-149			16000	94	6.9%	16	
4	111	15.8% 18.5%	-6000	5	-112			20000	53	3.9%	20	
5	130	15.4%	-4000	20	-75		2	24000	44	3.2%	24	
6 7	108 121	17.3%	-2000	113	-37		ā	28000	33	2.4%	28	
8	36	5.1%	0	274	0		3	32000	25	1.8%	32	
TOTAL	701		2000	381	37		3	36000	19	1.4%	36	
TOTAL			4000	330	75		4	40000	15	1.1%	40	
2-GATE S	ORTS	669	6000	250	112			44000	17		44	
DETECTR	SORTS	FREQ%	8000	146	149			48000	10	0.7%	48	
8			10000	73	187			52000	8	0.6%	52 54	
9	37	5.5%	12000	46	224			56000	10	0.7%	56 60	
10	92	13.8%	14000	27	261			50000	9	0.7% 0.2%	64	
11	104	15.5%	16000	20	299			64000	3 4	0.3%	68	
12	112	16.7%	18000	3	336			58000	4	0.3%	72	
13	131	19.6%	20000	0	373			72000	4	0.3%	76	
14	118	17.6%	22000	0	410			76000	3		80	
15	75	11.2%	24000	0	448			80000 84000	4	0.3%	84	
TOTAL	669		26000	0	485			34000	27		>84	
			>28000	0	0			TOTAL	1370	2.04		
			TOTAL	1695			ļ	IVIAL	,5.0			
SUMMARY			4740		SORTS BY	ONE O	ATE OU!	,	701			
		LE EVENTS	1319		SORTS BY			•	669			
		CLE EVENTS	854 1851		30K13 B1	0						
D	ISTRIBUTE	D EVENTS	1851									

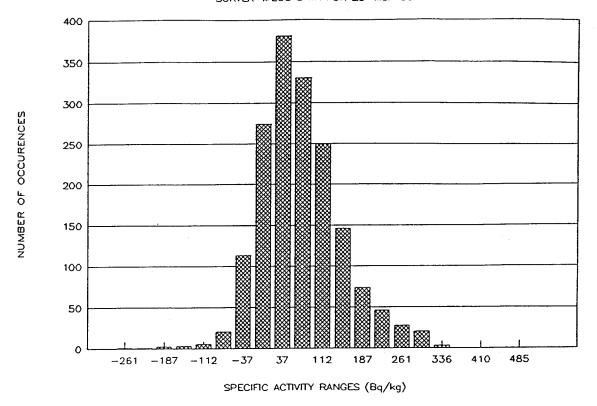
#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

2.00 Empty belt

3.00 Test (No process soil)

SORTER 1. LOG DATA FOR 26-Mar-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 26-Mor-93

45% 40% 35% FREQUENCY OF OCCURENCE (%) 30% 25% 20% 15% 10% 5% 0% 76 84 12 20 28 36 44 68

A-259

ACTIVITY RANGES (kBq)

SORTER 2 26-Mar-93				
AVERAGE BACKGROUND COUNT RATE	0.78 ± 0	.05 c/sec		
SORTER SOIL DENSITY	1.15 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³			
		CONTAMINATED	CLEAN	
MASS TOTAL		3.61 tons	86.5 tons	
MAXIMUM/SORT		56.2 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	43.5 kg	
				96.0%
WEIGHT RECOVERY OR VOLUME RECOVER	RY	2.86 yd³	68.5 yd³	71.4 yd3/day
EQUIVALENT SOIL-IN-GROUND		2.00 / 2	-	
PARTICLE ACTIVITY (MAXIMUM ESTIMA	ATE)			
TOTAL		21,955 kBq		
MAXIMUM/SORT		694 kBq		
		2.3 kBq		
MINIMUM/SORT				
DISPERSED + PARTICLE (REALISTIC I	ESTIMATE) ACTIVITY	11,913 kBq	8,254 kBq	
MAXIMUM/SORT		639 kBq	19 kBq	
MINIMUM/SORT		-18 Bq	-6 kBq	
SPECIFIC ACTIVITY		3,301 Bq/kg	95 Bq/k	9
<b>3. 23.</b> 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7.	·			
WORK HISTORY		LINDY DAY FUD	05:30 PM	
WORK DAY START	05:51 AM	WORK DAY END	05:30 PM	
PLANT START-UP	05:51 AM	PLANT SHUT-DOWN END SOIL PROCESSING		
START SOIL PROCESSING	06:15 AM	LUNCH PERIOD	0.0 hr	
LUNCH START	11:30 AM	LUNCH PERIOD	•••	
WORK HOURS		11.6 hr		
AVAILABLE HOURS		11.6 hr		
	OURS (total 20-sec records)	9.34 hr		
DOWN-TIME		2.31 hr		
TOTAL SYSTEM PAU	SF	1.78 hr		
NONAVAILABLE HOU		0.0 hr		
START-UP		0.41 hr		
SHUT-DOWN		0.54 hr		
PLANT PERFORMANCE	E	80.2%		
PRODUCTIVITY		80.2%		
		2.01/		
TOTAL SOIL PROCESSING RECORDS (2		2,914 3		
NONPROCESS RECORDS (Test, calibration)	ation, etc)	_		
20-SEC PROCESS RECORDS		1,681 44 MD>0 & MND=0		
TOTAL SORT		828 AD=0 & MD=0 &	NND>0	
NO SORT		809 AD>0&0 41D 40 410		
SOME SORT		0		
UNEXPLAINED RECO	_	· ·	UNEXPLAIN	PAUSE
0 <ad<1kbq &="" md="">0</ad<1kbq>	_		TIME	TIME
AD=0 4			12:51:58	05:51
AD<0 :				11:27
ACT_P <5 kBq	327 26.5%			

Printed on 05/22/93 at 11:37:30 AM

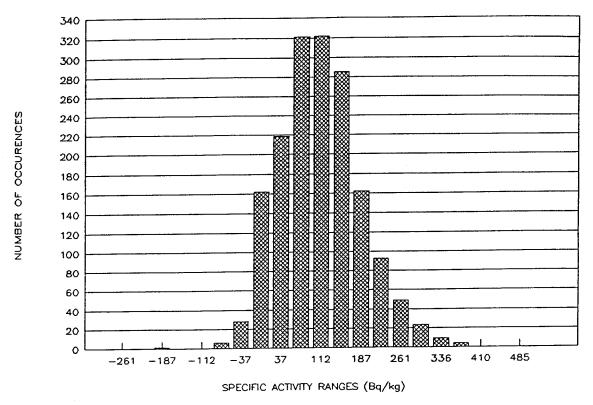
2	-SEC CO	UNT PERIODS				16,8	10					12
		2-SEC RECORD	S WITH S	CORTS	-	1,2	33 (ACT_P	>0 kBq	)			
		2-SEC RECORD	S WITH F	OSITIVES	IN >1 D	ETECTO	OR					
		2	DETECTO	RS	287		76.3%					
		. 3	DETECTO	RS	74		19.7%					
			DETECTO	RS	14		3.7%					
		5	DETECTO	RS	1		0.3%					
		•	DETECTO	RS	0		0.0%					
		7	DETECTO	RS	0		0.0%					
		8	DETECTO	RS	0		0.0%					
		1	OTAL			37	76					
		NET 2-SEC RE	CORDS WI	TH SORTS		85	57					
		2-SEC PERIOD	S WITH N	O SORTS		15,95	53					
		AVG TIME BET	WEEN 2-S	EC SORTS		39.	.2 sec					
1-GATE S	ORTS	628	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P	
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)	
1	22	3.5%	-14000	0	-261			4000	153	12.4%	4	
2	100	15.9%	-12000	0	-224			8000	488	39.6%	8	
3	117	18.6%	-10000	1	-187			12000	204	16.5%	12	
4	142	22.6%	-8000	0	-149			16000	109	8.8%	16	
5	123	19.6%	-6000	0	-112		;	20000	55	4.5%	20	
6	91	14.5%	-4000	6	-75		;	24000	37	3.0%	24	
7	26	4.1%	-2000	28	-37		;	28000	28	2.3%	28	
8	7	1.1%	0	162	0		:	32000	17	1.4%	32	
TOTAL	628		2000	219	37		:	36000	18	1.5%	36	
			4000	321	75			40000	13	1.1%	40	
2-GATE S	ORTS	605	6000	322	112		•	44000	13	1.1%	44	
DETECTR	SORTS	FREQ%	8000	285	149		•	48000	10	0.8%	48	
8			10000	162	187		;	52000	13	1.1%	52	
9	51	8.4%	12000	93	224		!	56000	7	0.6%	56	
10	105	17.4%	14000	49	261			50000	6	0.5%	60	
11	124	20.5%	16000	23	299		•	54000	2	0.2%	64	
12	125	20.7%	18000	9	<b>3</b> 36		•	58000	7	0.6%	68	
13	120	19.8%	20000	4	373		•	72000	4	0.3%	72	
14	63	10.4%	22000	0	410		;	76000	2	0.2%	76	
15	17	2.8%	24000	0	448		. 1	30000	4	0.3%	80	
TOTAL	605		26000	0	485		ŧ	34000	3	0.2%	84	
			>28000	0	0		>{	34000	40	3.2%	>84	
			TOTAL	1684			1	TOTAL	1233			
SUMMARY	TOTALS											
н	OT PARTI	CLE EVENTS	1185		SORTS BY	ONE	GATE ONLY	ſ	628			
M	ULTIPART	ICLE EVENTS	1137		SORTS BY	TWO	GATES		605			
D	ISTRIBUT	ED EVENTS	3062							٠		

#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

12:45

SORTER 2-LOG DATA FOR 26-Mar-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 26-Mor-93

45% 40% 35% FREQUENCY OF OCCURENCE (%) 30% 25% 20% 15% 10% 5% 0% 68 76 84 20 36 12 28 ACTIVITY RANGES (kBq)

A-262

SORTER 1 25-Mar-93				
JOHN CO. L. C.	-			
AVERAGE BACKGROUND COUNT RATE	0.70 ±	0.02 c/sec		
SORTER SOIL DENSITY	1.15 tons/m			
GROUND SOIL DENSITY	1.65 tons/m		S. 54	
		CONTAMINATED	CLEAN	
MASS TOTAL		1.40 tons	102.8 ton	S
MAXIMUM/SORT		10.7 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	42.8 kg	
WEIGHT RECOVERY OR VOLUME RECOVER	RY			98.7%
EQUIVALENT SOIL-IN-GROUND		1.11 yd³	81.5 yd³	82.6 yd³/day
PARTICLE ACTIVITY (MAXIMUM ESTIMA	ATE)			
TOTAL		21,427 kBq		
MAXIMUM/SORT		551 kBq		-
MINIHUM/SORT		2.5 kBq		
DISPERSED + PARTICLE (REALISTIC E	ESTIMATE) ACTIVITY	9,541 kBq	4,028 kBq	
MAXIMUM/SORT	is in the contract of the cont	501 kBq	15 kBq	
MINIMUM/SORT		0 Bq	-15 kBq	
SPECIFIC ACTIVITY		6,809 Bq/kg	39 Bq/I	(g
WORK HISTORY	05 54 44	INOU DAY END	05:30 PM	
WORK DAY START	05:51 AM	WORK DAY END	05:30 PM	
PLANT START-UP	05:51 AM	PLANT SHUT-DOWN END SOIL PROCESSING		
START SOIL PROCESSING	06:17 AM	LUNCH PERIOD	0.0 hr	
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 111	
WORK HOURS		11.6 hr		
AVAILABLE HOURS		11.6 hr		
ACTUAL PROCESS HO	XURS (total 20-sec records)	10.80 hr		
DOWN-TIME		0.85 hr		
TOTAL SYSTEM PAUS	SE	0.44 hr		
NONAVAILABLE HOUR	RS	0.0 hr		
START-UP		0.44 hr		
SHUT-DOWN		0.41 hr		
PLANT PERFORMANCE		92.7%	·	
PRODUCTIVITY		92.7%		
TOTAL SOIL PROCESSING RECORDS (2-	SEC and 20-SEC)	3,357		
NONPROCESS RECORDS (Test, calibra	ition, etc)	5		
20-SEC PROCESS RECORDS		1,944		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		1,101 AD=0 & MD=0		
SOME SORT		843 AD>0&0<\d>4NI	Camdum> Cum3xamd	(
UNEXPLAINED RECOR	DS	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	3	•	UNEXPLAIN	PAUSE
& O=QA	. MD 0		TIME	TIME
& 0>0A			12:41:28	05:50
ACT_P <5 kBq	433 30.6%		14:04:48	

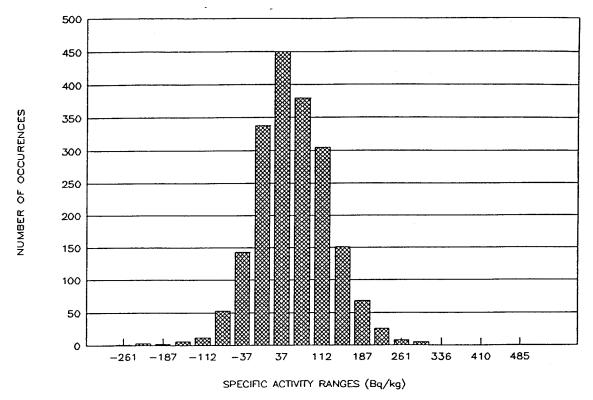
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2	-SEC CO	JNT PERIOOS				19,440			1	14:24:28
	320 00	2-SEC RECORD	S WITH S	ORTS	-		(ACT_P >0 kBq)	)		
		2-SEC RECORD			IN >1 DE					
			DETECTO		343		80.9%			
			DETECTO		68		16.0%			
			DETECTO		10		2.4%			
			DETECTO		3		0.7%			
			DETECTO		0		0.0%			
			DETECTO		0		0.0%			
			DETECTO		0		0.0%			
			OTAL			424				
		NET 2-SEC RE	CORDS WI	TH SORTS		989				
		2-SEC PERIOD				18,451				
		AVG TIME BET				39.3	sec			
1-GATE S	ORTS	702	ACT_ND	NUMBER	SPEC_A		ACT_P		FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(Bq)	(#)		(kBq)
										,
1	10	1.4%	-14000	1			4000	202		4
2	56	8.0%	-12000	3			8000	572		8
3	<b>9</b> 5	13.5%	-10000	2	- 187		12000	221	15.6%	12
4	133	18.9%	-8000	6	-149		16000	115		16
5	150	21.4%	-6000	12	-112		20000	75		20
6	110	15.7%	-4000	53	-75		24000	50		24
7	123	17.5%	-2000	143	-37		28000	38		28
8	25	3.6%	0	338	0		32000	26		<b>3</b> 2
TOTAL	702		2000	450	37		36000	19		36
			4000	380	75		40000	12		40
2-GATE S	ORTS	711	6000	304	112		44000	10		44
DETECTR	SORTS	FREQ%	8000	151	149		48000	15		48
8			10000	68	187		52000	7		52
9	30	4.2%	12000	25	224		56000	3		56
10	80	11.3%	14000	8	261		60000	7		60
11	113	15.9%	16000	5	299		64000	3		64 68
12	147	20.7%	. 18000	0	336		68000	2		72
13	145	20.4%	20000	0	373		72000	7		76
14	117	16.5%	22000	0	410		76000	0		80
15	79	11.12	24000	0	448		80000	1		84
TOTAL	711		26000	0	485		84000	3		>84
			>28000	0	0	•	>84000	25	1.8%	704
			TOTAL	1949			TOTAL	1413		
SUMMARY			4=10		SORTS BY	ONE CA	TE OULY	702		
		ICLE EVENTS	1369		SORTS BY			711		
		TICLE EVENTS	727		20K12 BI	INU W	(IL3			
D	ISTRIBU	TED EVENTS	0							

#### REC CODE EXPLANATION

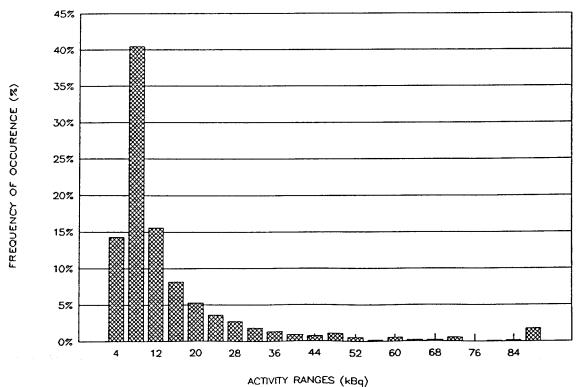
- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 1 LOG DATA FOR 25-Mar-93



# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 25-Mar-93



( -- 4)

SORTER 2 25-Mar-93	-								
AVERAGE BACKGROUND COUNT RATE		0.79	±	0.04	c/sec				
SORTER SOIL DENSITY		1.15	tons/m³	5					
GROUND SOIL DENSITY		1.65	tons/m³	3					
GROOMD SOLE DEMAND					CONTAM	INATED	CLEAN		
MASS TOTAL					1.62	tons	100.5		
MAXIMUM/SORT					56.2	kg	53.6	_	
MINIMUM/SORT					0.7	' kg	46.2	kg	
									00.7%
WEIGHT RECOVERY OR VOLUME RECOVERY							70.7	43	98.4% 81.0 yd³/day
EQUIVALENT SOIL-IN-GROUND					1.28	yd <sup>3</sup>	79.7	ya,	State you rody
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	)				40.000				
TOTAL					18,229	•			•
MAXIMUM/SORT						kBq			
MINIMUM/SORT					2.3	kBq			
					9,115	t Ra	8,636	kBa	
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTIVI	ITY			•	kBq		kBq	
MAXIMUM/SORT						Bq		kBq	
MINIMUM/SORT						Ba/kg		Bq/kg	
SPECIFIC ACTIVITY					7,032	. טקא אפ		, ,	
WORK HISTORY	05:50 AM				WORK D	AY END	05:30 PM		
WORK DAY START	05:50 AM				PLANT	SHUT-DOWN	05:30 PM		
PLANT START-UP	06:17 AM				END SC	IL PROCESSING	04:54 PM		
START SOIL PROCESSING	11:30 AM				LUNCH	PERIOD	0.0	hr	
LUNCH START	11120 121								
WORK HOURS						11.7 hr			
AVAILABLE HOURS						.11.7 hr			
ACTUAL PROCESS HOUR	S (total 20-	sec r	ecords)			10.59 hr			
DOWN-TIME						1.08 hr			
TOTAL SYSTEM PAUSE						0.48 hr			
NONAVAILABLE HOURS						0.0 hr			
START-UP						0.46 hr			
SHUT-DOWN						0.59 hr			
PLANT PERFORMANCE						90.8%			
PRODUCTIVITY						90.8%			
						7.04/			
TOTAL SOIL PROCESSING RECORDS (2-SE		)				3,064 5			
NONPROCESS RECORDS (Test, calibrati	on, etc)				1 004				
20-SEC PROCESS RECORDS					1,900	MD>0 & MND=0			
TOTAL SORT						3 AD=0 & MD=0 &	MND>0		
NO SORT						3 AD=0 & HD=0 8 3 AD>0&0 <md<m0< td=""><td></td><td>NDmax</td><td></td></md<m0<>		NDmax	
SOME SORT							THE PART IN THE		
UNEXPLAINED RECORDS	_				(	,	UNEXPLAI	N	PAUSE
0 <ad<1kbq &="" md="">0</ad<1kbq>	1						TIME		TIME
AD=0 & M	_						11:03:06	•	05:50
AD<0 & M		2/ /	~						08:27
ACT_P <5 kBq	308	26.6	^						

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2-SEC COUNT PERIODS	. 1	9,060			
2-SEC RECORDS WITH SORTS	-	1,158 (ACT_P	>0 kBq)		
2-SEC RECORDS WITH POSITIVES	IN >1 DET	ECTOR			
2 DETECTORS	263	83.5%			
3 DETECTORS	45	14.3%			
4 DETECTORS	7	2.2%			
5 DETECTORS	0	0.0%			
6 DETECTORS	0	0.0%			
7 DETECTORS	0	0.0%			
8 DETECTORS	0	0.0%			
TOTAL		315			
NET 2-SEC RECORDS WITH SORTS		843			
2-SEC PERIODS WITH NO SORTS	18,217				
AVG TIME BETWEEN 2-SEC SORTS		45.2 sec			

1-GATE S	ORTS	592	ACT ND	NUMBER	SPEC_A	ACT_P	SORT	FREQX	ACT_P
DETECTR	SORTS	FREQ%	(Bq)		(Bq/kg)	(Bq)	(#)		(kBq)
02120111			4. 4.						
1	24	4.1%	-14000	1	-261	4000	124	10.7%	4
2	96	16.2%	-12000	3	-224	8000	496	42.8%	8
3	117	19.8%	-10000	2	-187	12000	192	16.6%	12
4	148	25.0%	-8000	. 2	-149	16000	<b>8</b> 5	7.3%	16
5	108	18.2%	-6000	2	-112	20000	54	4.7%	20
6	63	10.6%	-4000	8	-75	24000	40	3.5%	24
7	27	4.6%	-2000	38	-37	28000	33	2.8%	28
8	9	1.5%	0	127	0	32000	24	2.1%	32
TOTAL	592		2000	284	37	36000	21	1.8%	36
			4000	401	75	40000	14	1.2%	40
2-GATE S	ORTS	566	6000	413	112	44000	8	0.7%	44
DETECTR	SORTS	FREQ%	8000	334	149	48000	3	0.3%	48
8			10000	164	187	52000	6	0.5%	52
9	51	9.0%	12000	68	224	56000	7	0.6%	56
10	97	17.1%	14000	45	261	60000	4	0.3%	60
11	134	23.7%	16000	11	299	64000	7	0.6%	64
12	125	22.1%	18000	6	336	68000	2	0.2%	68
13	92	16.3%	20000	2	373	72000	2	0.2%	72
14	43	7.6%	22000	0	410	76000	1	0.1%	76
15	24	4.2%	24000	0	448	80000	2	0.2%	80
TOTAL	566		26000	0	485	84000	2	0.2%	84
		•	>28000	0	0	>84000	31	2.7%	>84
			TOTAL	1911		TOTAL	1158		
SUMMARY	TOTALS								
		LE EVENTS	1154		SORTS BY	ONE GATE ONLY	592		
	MULTIPARTICLE EVENTS		944		SORTS BY	TWO GATES	566		
D	ISTRIBUTE	D EVENTS	318						

#### REC CODE EXPLANATION

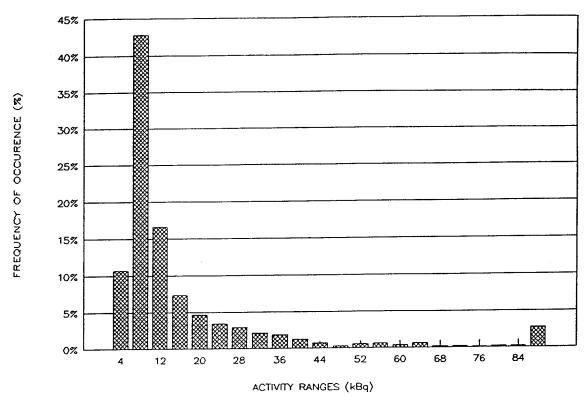
1.00 Source check (Soil on belt)

2.00 Empty belt

3.00 Test (No process soil)

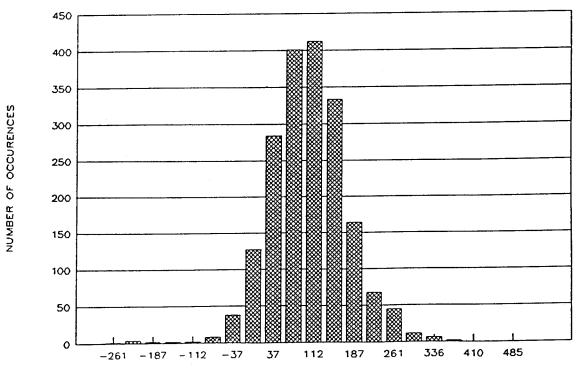
# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 25-Mor-93



## CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 25-Mor-93



SPECIFIC ACTIVITY RANGES (Bq/kg)

SORTER 1 24-Mar-93				
AVERAGE BACKGROUND COUNT RATE	0.69 ±	0.02 c/sec		
SORTER SOIL DENSITY	1.15 tons/m	,3		
GROUND SOIL DENSITY	1.65 tons/m	,5		
drooms cold conserve		CONTAMINATED	CLEAN	
MASS TOTAL		0.88 tons	38.5 tor	ns
MAXIMUM/SORT		14.1 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	39.5 kg	
				97.8%
WEIGHT RECOVERY OR VOLUME RECOVERY	1	0.70 yd³	30.5 yd³	
EQUIVALENT SOIL-IN-GROUND		0.70 yd-	30.5 ya	Ji.L ya /day
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	(E)			
TOTAL		23,430 kBq		
MAXIMUM/SORT	•	3,247 kBq		
MINIMUM/SORT		2.4 kBq		
DISPERSED + PARTICLE (REALISTIC ES	STIMATE) ACTIVITY	9,594 kBq	2,246 kBq	
MAXIMUM/SORT		2667 kBq	17 kBq	
MINIMUM/SORT		0 Bq	-5 kBq	
SPECIFIC ACTIVITY		10,938 Bq/kg	58 Bq/	kg
WORK HISTORY				
WORK DAY START	07:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	07:00 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	12:49 PM	END SOIL PROCESSING	04:53 PM	
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr	
		40.01		
WORK HOURS		10.0 hr		
AVAILABLE HOURS		10.0 hr 4.08 hr		
	RS (total 20-sec records)	5.92 hr		
DOWN-TIME		3.66 hr		
TOTAL SYSTEM PAUSE NONAVAILABLE HOURS		0.0 hr		
START-UP		5.83 hr		
SHUT-DOWN		0.60 hr		
PLANT PERFORMANCE		40.8%		
PRODUCTIVITY		40.8%		
TOTAL SOIL PROCESSING RECORDS (2-S		1,710		
NONPROCESS RECORDS (Test, calibrat	ion, etc)	7		
20-SEC PROCESS RECORDS		734 0 MD>0 8 MMD=0		
TOTAL SORT		0 MD>0 & MND=0 382 AD=0 & MD=0 &	. MAD>O	
NO SORT		362 AD>0&0 4ND<0 & 352 AD>0&0 4ND 4NND		x
SOME SORT	c	0 מוויס מוויס מוויס מוויס	manual more a more	
UNEXPLAINED RECORD	S 0	,	UNEXPLAIN	PAUSE
0 <ad<1kbq &="" md="">0 AD=0 &amp;</ad<1kbq>			TIME	TIME
& 0-0 & & 0>0 AD			None	09:10
ACT P <5 kBq	291 29.8%		•	
voi i a vod	<b>4.</b> • • • • • • • • • • • • • • • • • • •			

2	-SEC CO	UNT PERIODS				7,340				
-	020	2-SEC RECORD	S WITH S	ORTS	-	976	(ACT_P >0 kBq)			
		2-SEC RECORD			IN >1 DE	TECTOR				
			DETECTO		252		77.1%			
		3	DETECTO	RS	60		18.3%			
		4	DETECTO	RS	10		3.1%			
		5	DETECTO	RS	3		0.9%			
			DETECTO		0		0.0%			
		7	DETECTO	RS	0		0.0%			
		8	DETECTO	RS	0		0.0%			
		т	OTAL			327				
		NET 2-SEC RE	CORDS WI	TH SORTS		649				
		2-SEC PERIOD	S WITH N	O SORTS		6,691				
		AVG TIME BET	WEEN 2-S	EC SORTS		22.6	sec			
1-GATE S	ORTS	491	ACT_ND	NUMBER	SPEC_A		ACT_P		FREQX	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(pg)	(#)		(kBq)
									45 /4	,
1	3	0.6%	-14000	0	-261		4000	152		4
2	27	5.5%	-12000	2	-224		8000	366		8
3	63	12.8%	-10000	0	-187		12000	136		12
4	93	18.9%	-8000	2	-149		16000	80		16
5	125	25.5%	-6000	0	-112		20000	56		20
6	100	20.4%	-4000	18	-75		24000	42		24
7	69	14.1%	-2000	56	-37		28000	28		28
8	11	2.2%	0	108	0		32000	20		32
TOTAL	491		2000	152	37		36000	10		36
			4000	136	75		40000	8		40 44
2-GATE S	ORTS	485	6000	121	112		44000	6		44
DETECTR	SORTS	FREQ%	8000	46	149		48000	7		<del>40</del> 52
8			10000	38	187		52000	4		56
9	19	3.9%	12000	29	224		56000	6		60
10	49	10.1%	14000	25	261		60000	8		64
11	71	14.6%	16000	5	299		64000	8		68
12	114	23.5%	18000	3	336		68000	1		72
13	112	23.1%	20000	0	373		72000	2		76
14	80	16.5%	22000	0	410		76000	1		80
15	40	8.2%	24000	0	448		80000	4	0.4%	84
TOTAL	485		26000	0	485		84000	28		>84
			>28000	0	0		>84000	976		-04
			TOTAL	741			TOTAL	710		
SUMMARY			007		SORTS BY	ONE CO	LTE ONLY	491		
HOT PARTICLE EVENTS 893			SORTS BY			485				
		TICLE EVENTS	417		30K13 B1	IWU W		,,,		
D	ISTRIBU	TED EVENTS	0							

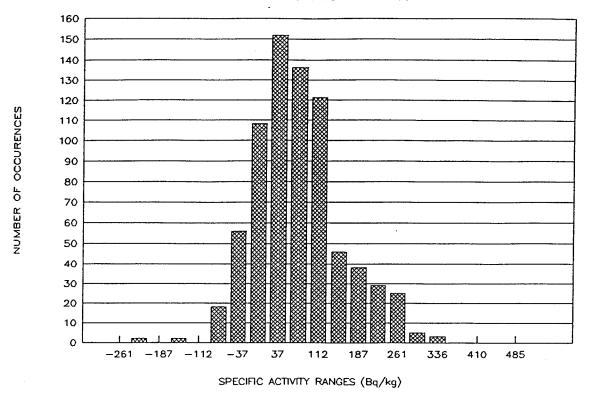
#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

2.00 Empty belt

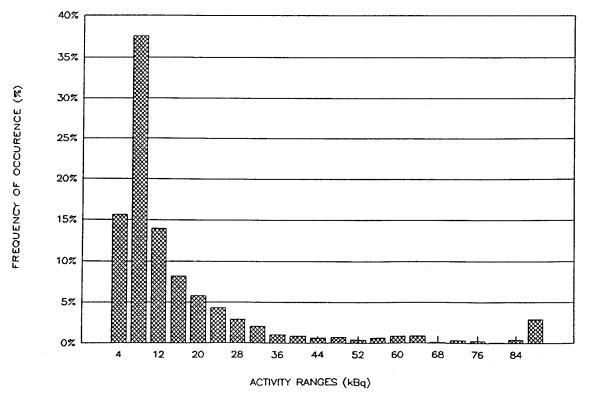
3.00 Test (No process soil)

SORTER 1 LOG DATA FOR 24-Mar-93



## JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 24-Mar-93



SORTER 2 24-Mar-93	_			
AVERAGE BACKGROUND COUNT RATE	0.79 ± 0.0	4 c/sec		
SORTER SOIL DENSITY	1.15 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³			
GROUND SOLE DEMOTE.		CONTAMINATED	CLEAN	
MASS TOTAL		0.86 tons	38.6 tons	
MAXIMUM/SORT		53.6 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	43.5 kg	
HIRITION				07.04
WEIGHT RECOVERY OR VOLUME RECOVERY				97.8%
EQUIVALENT SOIL-IN-GROUND		0.69 yd <sup>3</sup>	30.6 yd3	31.3 yd3/day
Eaglanetin Cons				
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	)			
TOTAL		10,309 kBq		
MAXIMUM/SORT		387 kBq		
MINIMUM/SORT		2.7 kBq		
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTIVITY	4,941 kBq	3,787 kBq	
MAXIMUM/SORT		251 kBq	19 kBq	
MINIMUM/SORT		0 Bq	-5 kBq	
SPECIFIC ACTIVITY		5,713 Bq/kg	98 Bq/k	9
<b>5. 22.</b>				
WORK HISTORY			-5 70 04	
WORK DAY START	07:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	07:00 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	12:49 PM	END SOIL PROCESSING		
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr	
WORK HOURS		10.0 hr		
AVAILABLE HOURS		10.0 hr		
ACTUAL PROCESS HOUR	RS (total 20-sec records)	4.09 hr		
DOWN-TIME		5.91 hr		
TOTAL SYSTEM PAUSE		3.66 hr		
NONAVAILABLE HOURS		0.0 hr		
START-UP		5.83 hr		
SHUT-DOWN		0.59 hr		
PLANT PERFORMANCE		40.9%		
PRODUCTIVITY		40.9%		
		1,340		
TOTAL SOIL PROCESSING RECORDS (2-SI	C and 20-SEC)	5		
NONPROCESS RECORDS (Test, calibrat	ion, etc)	736		
20-SEC PROCESS RECORDS		730 4 MD>0 & MND=0		
TOTAL SORT		391 AD=0 & MD=0 &		
NO SORT		341 AD>0&0		
SOME SORT		0		
UNEXPLAINED RECORDS		Ü	UNEXPLAIN	PAUSE
0 <ad<1kbq &="" md="">0</ad<1kbq>	1		TIME	TIME
AD=0 & 1			13:51:57	09:10
AD<0 & 0			· · · · · · · · · · · · · · · · · · ·	
ACT_P <5 kBq	147 24.3%			

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2-SEC COUNT PERIODS	7,360	)
2-SEC RECORDS WITH SORTS	- 604	(ACT_P >0 kBq)
2-SEC RECORDS WITH POSITIVES	IN >1 DETECTOR	₹
2 DETECTORS	158	80.6%
3 DETECTORS	33	16.8%
4 DETECTORS	5	2.6%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL	196	<b>S</b>
NET 2-SEC RECORDS WITH SORTS	408	3
2-SEC PERIODS WITH NO SORTS	6,952	?
AVG TIME BETWEEN 2-SEC SORTS	36.1	sec

DETECTR         SORTS         FREQX         (Bq)         (#) (Bq/kg)         (Bq)         (#)         (kBq)           1         4         1.3x -14000         1 -261         4000         68 11.3x 4         4           2         44         14.2x -12000         1 -224         8000         221 36.6x 8         8           3         77         24.9x -10000         0 -187         12000         104 17.2x 12         12           4         66         21.4x -8000         0 -149         16000         64 10.6x 16         16           5         60         19.4x -6000         1 -112         20000         30 5.0x 20         20           6         31         10.0x -4000         4 -75         24000         26 4.3x 24         24           7         21         6.8x -2000         16 -37         28000         15 2.5x 28         8         6 1.9x 0         0 44 0         32000         15 2.5x 32         32           TOTAL         309         2000         93 37         36000         10 1.7x 36         4000         5 0.8x 40
2 44 14.2% -12000 1 -224 8000 221 36.6% 8 3 77 24.9% -10000 0 -187 12000 104 17.2% 12 4 66 21.4% -8000 0 -149 16000 64 10.6% 16 5 60 19.4% -6000 1 -112 20000 30 5.0% 20 6 31 10.0% -4000 4 -75 24000 26 4.3% 24 7 21 6.8% -2000 16 -37 28000 15 2.5% 28 8 6 1.9% 0 44 0 32000 15 2.5% 32 TOTAL 309 2000 93 37 36000 10 1.7% 36
2 44 14.2% -12000 1 -224 8000 221 36.6% 8 3 77 24.9% -10000 0 -187 12000 104 17.2% 12 4 66 21.4% -8000 0 -149 16000 64 10.6% 16 5 60 19.4% -6000 1 -112 20000 30 5.0% 20 6 31 10.0% -4000 4 -75 24000 26 4.3% 24 7 21 6.8% -2000 16 -37 28000 15 2.5% 28 8 6 1.9% 0 44 0 32000 15 2.5% 32 TOTAL 309 2000 93 37 36000 10 1.7% 36
3 77 24.9% -10000 0 -187 12000 104 17.2% 12 4 66 21.4% -8000 0 -149 16000 64 10.6% 16 5 60 19.4% -6000 1 -112 20000 30 5.0% 20 6 31 10.0% -4000 4 -75 24000 26 4.3% 24 7 21 6.8% -2000 16 -37 28000 15 2.5% 28 8 6 1.9% 0 44 0 32000 15 2.5% 32 TOTAL 309 2000 93 37 36000 10 1.7% 36
4 66 21.4% -8000 0 -149 16000 64 10.6% 16 5 60 19.4% -6000 1 -112 20000 30 5.0% 20 6 31 10.0% -4000 4 -75 24000 26 4.3% 24 7 21 6.8% -2000 16 -37 28000 15 2.5% 28 8 6 1.9% 0 44 0 32000 15 2.5% 32 TOTAL 309 2000 93 37 36000 10 1.7% 36
5 60 19.4% -6000 1 -112 20000 30 5.0% 20 6 31 10.0% -4000 4 -75 24000 26 4.3% 24 7 21 6.8% -2000 16 -37 28000 15 2.5% 28 8 6 1.9% 0 44 0 32000 15 2.5% 32 TOTAL 309 2000 93 37 36000 10 1.7% 36
6 31 10.0% -4000 4 -75 24000 26 4.3% 24 7 21 6.8% -2000 16 -37 28000 15 2.5% 28 8 6 1.9% 0 44 0 32000 15 2.5% 32 TOTAL 309 2000 93 37 36000 10 1.7% 36
7 21 6.8% -2000 16 -37 28000 15 2.5% 28 8 6 1.9% 0 44 0 32000 15 2.5% 32 TOTAL 309 2000 93 37 36000 10 1.7% 36
8 6 1.9% 0 44 0 32000 15 2.5% 32 TOTAL 309 2000 93 37 36000 10 1.7% 36
TOTAL 309 2000 93 37 36000 10 1.7% 36
TOTAL 307
4000 150 75 40000 5 0.8% 40
2-GATE SORTS 295 6000 153 112 44000 4 0.7% 44
DETECTR SORTS FREQX 8000 115 149 48000 4 0.7% 48
8 10000 69 187 52000 3 0.5% 52
9 21 7.1% 12000 46 224 56000 5 0.8% 56
10 44 14.9% 14000 34 261 60000 5 0.8% 60
11 76 25.8% 16000 10 299 64000 2 0.3% 64
12 59 20.0% 18000 3 336 68000 2 <b>0.3</b> % 68
13 55 18.6% 20000 1 373 72000 1 0.2% 72
14 24 8.1% 22000 0 410 76000 1 0.2% 76
15 16 5.4% 24000 0 448 80000 1 0.2% 80
TOTAL 295 26000 0 485 84000 0 0.0% 84
>28000 0 0 >84000 18 3.0% >84
TOTAL 741 TOTAL 604
SUMMARY TOTALS
HOT PARTICLE EVENTS 568 SORTS BY ONE GATE ONLY 309
MULTIPARTICLE EVENTS 449 SORTS BY TWO GATES 295
DISTRIBUTED EVENTS 274

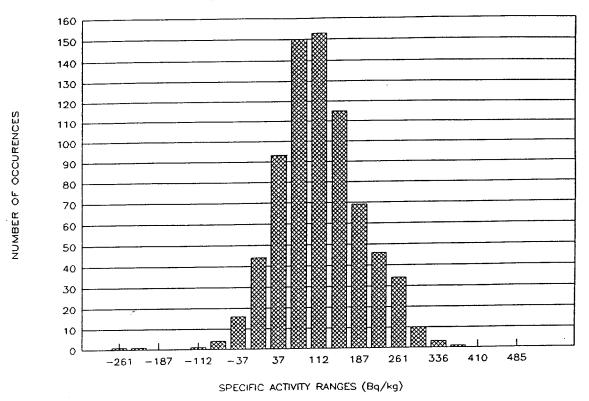
### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

2.00 Empty belt

3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 24-Mar-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 24-Mor-93

40% 35% FREQUENCY OF OCCURENCE (%) 30% 25% 20% 15% 10% 5% 0% 76 84 68 20 28 36 52 60 12

ACTIVITY RANGES (kBq)

A-274

SORTER 1 23-Mar-93					
AVERAGE BACKGROUND COUNT RATE		0.70 ±	0.02 c/sec		
SORTER SOIL DENSITY		1.15 tons/m	3		
GROUND SOIL DENSITY		1.65 tons/m <sup>3</sup>	•		
dicollo cora canala			CONTAMINATED	CLEAN	
MASS TOTAL			0.74 tons	99.2 to	ns
MAXIMUM/SORT			56.2 kg	53.6 kg	
MINIMUM/SORT			0.7 kg	46.2 kg	
WEIGHT RECOVERY OR VOLUME RECOVER	Υ				99.3%
EQUIVALENT SOIL-IN-GROUND			0.59 yd <sup>3</sup>	78.6 yd	79.2 yd3/day
PARTICLE ACTIVITY (MAXIMUM ESTIMA	TE)				
TOTAL			10,215 kBq		
MAXIMUM/SORT			172 kBq		
MINIMUM/SORT			2.2 kBq		
DISPERSED + PARTICLE (REALISTIC E	STIMATE) ACTI	VITY	4,411 kBq	1,608 kB	1
MAXIMUM/SORT			134 kBq	13 kB	7
MINIMUM/SORT			0 Bq	-14 k8d	1
SPECIFIC ACTIVITY			5,974 Bq/kg	16 Bq,	/kg
WORK HISTORY					
WORK DAY START	MA 00:60		WORK DAY END	05:30 PM	
PLANT START-UP	06:00 AM		PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:15 AM		END SOIL PROCESSING	04:49 PM	
LUNCH START	11:30 AM		LUNCH PERIOD	0.0 hr	
WORK HOURS			11.5 hr		
AVAILABLE HOURS		•	11.5 hr		
ACTUAL PROCESS HO	JRS (total 20	-sec records)	10.36 hr		
DOWN-TIME			1.14 hr		
TOTAL SYSTEM PAUS	E		0.60 hr		
NONAVAILABLE HOURS	S		0.0 hr		
START-UP			0.25 hr		
SHUT-DOWN			0.67 hr		
PLANT PERFORMANCE			90.1%		
PRODUCTIVITY			90.1%		
TOTAL SOIL PROCESSING RECORDS (2-	SEC and 20-SE	c)	2,555		
NONPROCESS RECORDS (Test, calibrat	tion, etc)		10		
20-SEC PROCESS RECORDS			1,865		
TOTAL SORT			1 MD>0 & MND=0		
NO SORT			1,390 AD=0 & MD=0 &		
SOME SORT			474 AD>0&0 4MD 4MN	)max&MND <mnuma< td=""><td>ex.</td></mnuma<>	ex.
UNEXPLAINED RECORD			0	181CVD1 4 141	DALICE
0 <ad<1kbq &="" md="">0</ad<1kbq>	0			UNEXPLAIN	PAUSE TIME
& 0=0 &				TIME	05:53
\$ 0> CA		20.64		11:29:41	11:17
ACT_P <5 kBq	193	28.0%			11.17

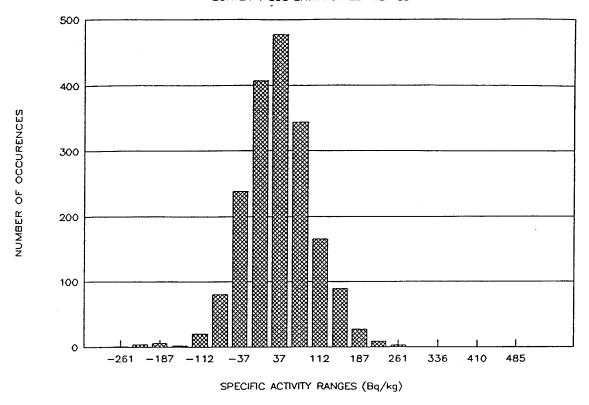
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2	-cer call	IT PERIODS				18,650						11:30
		2-SEC RECORD	S UITH S	ORTS	-		(ACT_P	>0 kBq)				
		2-SEC RECORD			IN >1 DE		-					
			DETECTO		160		81.6%				,	
			DETECTO		33		16.8%					
			DETECTO		3		1.5%					
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
		T	OTAL			196						
	,	ET 2-SEC RE	CORDS WI	TH SORTS		494						
		2-SEC PERIOD				18,156						
		AVG TIME BET				75.5	sec					
1-GATE S	ORTS	338	ACT_ND	NUMBER	SPEC_A		A	CT_P		FREQ%	ACT_P	
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		•	(Bq)	(#)		(kBq)	
••••												
1	6	1.8%	-14000	1	-261		4	4000	101	14.6%	4	
2	36	10.7%	-12000	4	-224		ŧ	8000	257		8	
3	44	13.0%	-10000	6	- 187			2000	101	14.6%	12	
4	63	18.6%	-8000	2	-149			5000	65	9.4%	16	
5	67	19.8%	-6000	20	-112			0000	31	4.5%	20	
6	57	16.9%	-4000	81	-75			4000	20	2.9%	24	
7	54	16.0%	-2000	238	-37			8000	20	2.9%	28	
8	11	3.3%	0	407	0			2000	16	2.3%	32 74	
TOTAL	338		2000	478	37			5000	12	1.7%	36 40	
			4000	343	75			0000	10	1.4%	44	
2-GATE S	ORTS	352	6000	166	112			4000	11	1.6%	48	
DETECTR	SORTS	FREQ%	8000	90	149			B000	3	0.4% 0.6%	52	
8			10000	27	187			2000	4	1.3%	56	
9	23	6.5%	12000	9	224			6000	9	1.0%	60	
10	41	11.6%	14000	3	261			0000	7	0.4%	64	
11	55	15.6%	16000	0	299			4000	3 4	0.4%	68	
12	67	19.0%	18000	0	336			8000	0	0.0%	72	
13	71	20.2%	20000	0	373			2000	3		76	
14	<b>6</b> 6	18.8%	22000	0	410			6000	0	0.0%	80	
15	29	8.2%	24000	0	448			0000	2	0.3%	84	
TOTAL	<b>3</b> 52		26000	0	485			4000	11	1.6%	>84	
			>28000	0	0			4000 DTAL	690		•	
			TOTAL	1875			•	DIAL	0,0			
SUMMARY			400		COOTC O	ONE	ATE ONLY		338			
		CLE EVENTS	682		SORTS BY				352			
		ICLE EVENTS	337		20K12 B	180 0	A1L4					
D	ISTRIBUTE	ED EVENTS	83									

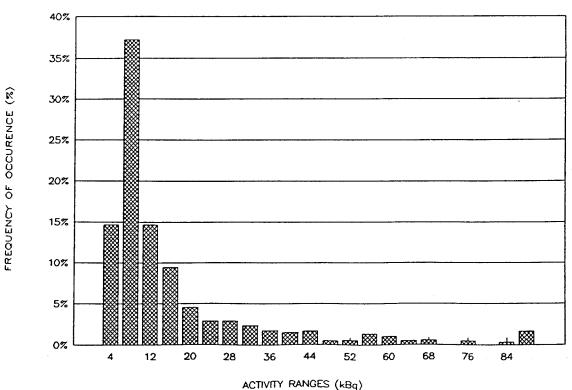
#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 1 LOG DATA FOR 23-Mor-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 23-Mor-93



CHALL LOUISES (KBd

SORTER 2 23-Mar-93				
AVERAGE BACKGROUND COUNT RATE	0.78 ± 0.0	5 c/sec		
SORTER SOIL DENSITY	1.15 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³			
GROOMD SOLE SELECT		CONTAMINATED	CLEAN	
MASS TOTAL		0.25 tons	32.8 tons	
MAXIMUM/SORT		56.2 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	49.5 kg	
				00.79
WEIGHT RECOVERY OR VOLUME RECOVERY				99.3%
EQUIVALENT SOIL-IN-GROUND		0.20 yd <sup>3</sup>	26.0 yd³	26.2 yd3/day
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	E)			
TOTAL		2,207 kBq		
MAXIMUM/SORT		179 kBq		
MINIMUM/SORT		2.7 kBq		
			2 /02 12	
DISPERSED + PARTICLE (REALISTIC ES	TIMATE) ACTIVITY	1,111 kBq	2,490 kBq	
MAXIMUM/SORT		141 kBq	17 k8q	
MINIMUM/SORT		-8078 Bq	-11 kBq	_
SPECIFIC ACTIVITY		4,497 Bq/kg	76 Bq/ks	3
WORK HISTORY		LIBOUR DAY END	05:30 PM	
WORK DAY START	06:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	06:00 AM	PLANT SHUT-DOWN END SOIL PROCESSING		
START SOIL PROCESSING	10:52 AM		0.0 hr	
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 111	
		11.5 hr		
WORK HOURS		11.5 hr		
AVAILABLE HOURS	RS (total 20-sec records)	3.43 hr		
	(\$ ({otat 20-sec records)	8.07 hr		
DOWN-TIME		6.35 hr		
TOTAL SYSTEM PAUSE		0.0 hr		
NONAVAILABLE HOURS		4.88 hr		
START-UP		2.98 hr		
SHUT-DOWN		29.8%		
PLANT PERFORMANCE		29.8%		
PRODUCTIVITY				
TOTAL SOIL PROCESSING RECORDS (2-S	FC and 20-SEC)	<b>7</b> 53		
NONPROCESS RECORDS (Test, calibrat		5		
20-SEC PROCESS RECORDS	•	617		
TOTAL SORT		1 MD>0 & MND=0		
NO SORT		449 AD=0 & MD=0 &		
SOME SORT		167 AD>0&0 <md<mn< td=""><td>max&amp;MND <mndmax< td=""><td></td></mndmax<></td></md<mn<>	max&MND <mndmax< td=""><td></td></mndmax<>	
UNEXPLAINED RECORD	S	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		UNEXPLAIN	PAUSE
AD=0 & :	<b>4</b> 0 0		TIME	TIME
AD<0 &	_		11:29:42	05:53
ACT_P <5 kBq	32 23.5%			11:17
101 2 vod				

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	2-SEC COUN	T DEDIGOS				6,170						11:30
4		-SEC RECORDS	S UTTH SO	2790	_		(ACT_P	>0 kBq)				14:32
		-SEC RECORD			IN >1 DET		· <del>-</del>					
	2		DETECTOR		34		87.2%					
			DETECTOR		5		12.8%					
			DETECTOR		0		0.0%					
			DETECTOR		0		0.0%					
			DETECTOR		0		0.0%					
					0		0.0%					
			DETECTO		0		0.0%					
			DETECTOR	(3	·	39						
			OTAL	ru contc		97						
		ET 2-SEC RE				6,073						
		-SEC PERIOD				127.2	sec					
	A	VG TIME BET	WEEN 2-50	C SURIS		121.1	300					
1-GATE	SORTS	70	ACT_ND	NUMBER	SPEC_A		A	CT_P	SORT	FREQ%	ACT_P	
DETECTR		FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)	
									4.	10.7%	4	
1	4	5.7%	-14000	0	-261			4000	14	10.3%	8	
2	10	14.3%	-12000	0	-224			8000	54	39.7%	12	
3	12	17.1%	-10000	3	-187			2000	22	16.2%	16	
4	12	17.1%	-8000	3	-149			6000	11	8.1%	20	
5	13	18.6%	-6000	2	-112	-		0000	3	2.2%		
6	10	14.3%	-4000	7	-75			4000	9		24 28	
7	7	10.0%	-2000	18	-37			8000	2		32	
8	2	2.9%	0	49	0			2000	3		36	
TOTAL	70		2000	98	37			6000	0		30 40	
			4000	138	75			0000	5		44	
2-GATE	SORTS	66	6000	141	112			4000	2		44	
DETECTR	SORTS	FREQX	8000	73	149			8000	1	0.7%	<del>40</del> 52	
8			10000	44	187			2000	1		56	
9	9	13.6%	12000	<b>2</b> 6	224			6000	2			
10	11	16.7%	14000	10	261			0000	0		60	
11	15	22.7%	16000	7	299			4000	3		64	
12	11	16.7%	18000	3	336			8000	1		68	
13	12	18.2%	20000	0	373			2000	0		72 77	
14	5	7.6%	22000	0	410			6000	0		76	
15	3	4.5%	24000	0	448			0000	0		80	
TOTAL	<b>6</b> 6		26000	0	485			4000	1		84	
			>28000	0	0			4000	2		>84	
			TOTAL	622			. 1	OTAL	136			
SUMMARY	TOTALS											
	HOT PARTIC	CLE EVENTS	134		SORTS BY			!	70			
MULTIPARTICLE EVENTS 150			SORTS BY	TWO G	ATES		66	•				
	DISTRIBUTE	ED EVENTS	83									

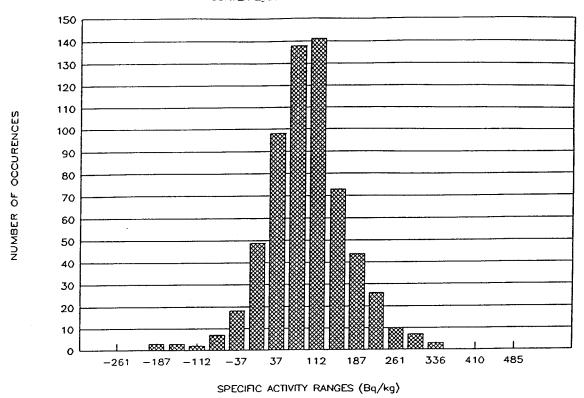
#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

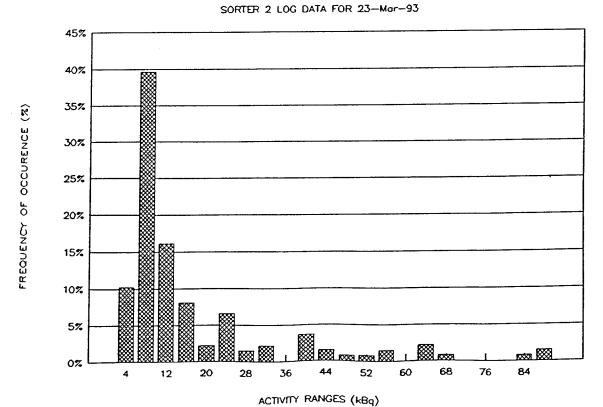
2.00 Empty belt

3.00 Test (No process soil)

SORTER 2\_LOG DATA FOR 23-Mar-93



# JA SOIL CLEANUP PLANT HOT PARTICLES



A-280

SORTER 1 22-Mar-93				
AVERAGE BACKGROUND COUNT RATE	0.70 ±	0.03 c/sec		
SORTER SOIL DENSITY	1.15 tons/r	n³		
GROUND SOIL DENSITY	1.65 tons/r	n³		
		CONTAMINATED	CLEAN	
MASS TOTAL		3.59 tons	100.3 ton	s
MAXIMUM/SORT		53.6 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	46.2 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY				96.5%
EQUIVALENT SOIL-IN-GROUND		2.84 yd³	79.5 yd³	82.4 yd3/day
EGOLANCEM 2015 IN GROOMS		,_	•	, .
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	:)			
TOTAL		18,406 kBq		
MAXIMUM/SORT		825 kBq	•	
MINIMUM/SORT		2.1 kBq		
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTIVITY	9,579 kBq	4,211 kBq 18 kBq	
MAXIMUM/SORT		644 kBq	-9 k8q	
MINIMUM/SORT		0 Bq	42 Bq/	
SPECIFIC ACTIVITY		2,671 Bq/kg	42 BQ/	Kg .
WORK HISTORY				
WORK DAY START	06:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	06:00 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:17 AM	END SOIL PROCESSING	05:10 PM	
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr	
WORK HOURS		11.5 hr		
AVAILABLE HOURS		11.5 hr		
	S (total 20-sec records)	10.77 hr		
DOWN-TIME		0.73 hr		
TOTAL SYSTEM PAUSE		0.40 hr		
NONAVAILABLE HOURS		0.0 hr		
START-UP		0.30 hr		
SHUT-DOWN		0.33 hr		
PLANT PERFORMANCE		93.7%		
PRODUCTIVITY		93.7%		
TOTAL SOIL PROCESSING RECORDS (2-SE	C and 20-SEC)	3,057		
NONPROCESS RECORDS (Test, calibrati		25		
20-SEC PROCESS RECORDS		1,939		
TOTAL SORT		47 MD>0 & MND=0		
NO SORT		1,239 AD=0 & MD=0 &	MND>0	
SOME SORT		653 AD>0&0<4ND 4NND	max&MND <mndma< td=""><td>K</td></mndma<>	K
UNEXPLAINED RECORDS		0		•
0 <ad<1kbq &="" md="">0</ad<1kbq>	1	*	UNEXPLAIN	PAUSE
AD=0 & M	0		TIME	ŢIME
AD<0 & M	0		15:09:13	05:53
ACT_P <5 kBq	381 34.1%			

Printed on 05/22/93 at 11:11:26 AM

19,390

		2-SEC RECORD	S WITH S	ORTS	-	1,118	(ACT_P	>0 kBq)			
		2-SEC RECORD			IN >1 DI	ETECTOR					
			DETECTO		264		83.0%				
			DETECTO		45		14.2%				
		4	DETECTO	RS	7		2.2%				
		5	DETECTO	RS	1		0.3%				
			DETECTO		0		0.0%				
		7	DETECTO	RS	0		0.0%				
		8	DETECTO	RS	0		0.0%				
		τ	OTAL			318					
		NET 2-SEC RE	CORDS WI	TH SORTS		800					
	2-SEC PERIODS WITH NO SORTS			18,590							
		AVG TIME BET	WEEN 2-S	EC SORTS		48.5	sec				
1-GATE S	ORTS	577	ACT_ND	NUMBER	SPEC_A		,	CT_P		FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)
											,
1	9	1.6%	-14000	3	-261			4000	196	17.5%	4
2	41	7.1%	-12000	1	-224			8000	436	39.0%	8
3	85	14.7%	-10000	6	-187			2000	163	14.6%	12
4	116	20.1%	-8000	9	-149			6000	91	8.1%	16
5	124	21.5%	-6000	13	-112			20000	47	4.2%	20
6	105	18.2%	-4000	54	-75			24000	37	3.3%	24
7	77	13.3%	-2000	155	-37			8000	23	2.1%	28
8	20	3.5%	0	367	0			2000	23	2.1%	32
TOTAL	577		2000	467	37			6000	13	1.2%	36
			4000	350	75			0000	4	0.4%	40
2-GATE S	ORTS	541	6000	268	112			4000	13	1.2%	44 48
DETECTR	SORTS	FREQX	8000	123	149			8000	4	0.4%	40 52
8			10000	. 79	187			2000	4	0.4%	56
9	22	4.1%	12000	29	224			6000	6	0.5% 0.7%	60
10	64	11.8%	14000	18	261			0000	8 7	0.6%	64
11	<b>9</b> 8	18.1%	16000	6	299			4000	5	0.4%	68
12	115	21.3%	18000	14	336			8000	4	0.4%	72
13	110	20.3%	20000	2	373			2000	3	0.3%	76
14	<b>8</b> 6	15.9%	22000	0	410			6000	3	0.3%	80
15	46	8.5%	24000	0	448			0000			84
TOTAL	541		26000	0	485			4000	2	0.2%	
			>28000	0	0			4000	26	2.3%	>84
			TOTAL	1964			1	OTAL	1118		
SUMMARY 1			4000			ONE 05	TC 0444		577		
		CLE EVENTS	1081		SORTS BY				541		
M	JLTIPART	ICLE EVENTS	861		SORTS BY	TWO GA	162		J4 I		

#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt

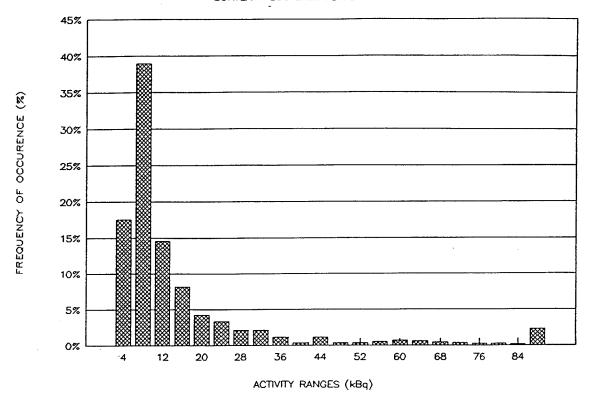
DISTRIBUTED EVENTS 3412

2-SEC COUNT PERIODS

3.00 Test (No process soil)

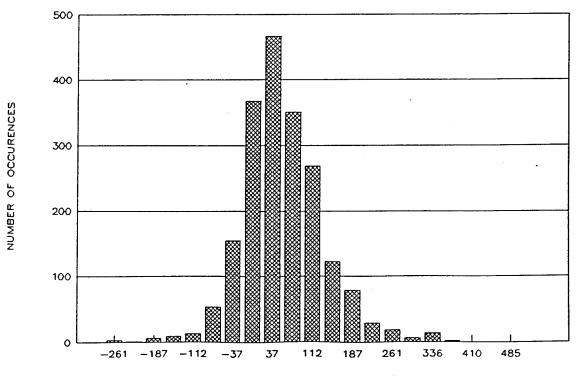
# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 22-Mor-93



## CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 22-Mar-93



SPECIFIC ACTIVITY RANGES (Bq/kg)

SORTER 2 22-Mar-93				
AVERAGE BACKGROUND COUNT RATE	0.79 ±	0.04 c/sec		
SORTER SOIL DENSITY	1.15 tons/m	<b>1</b> 5		
GROUND SOIL DENSITY	1.65 tons/m	13		
		CONTAMINATED	CLEAN	
MASS TOTAL		5.13 tons	98.7 ton	S
MAXIMUM/SORT		53.6 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	46.9 kg	
WEIGHT RECOVERY OR VOLUME RECOVER	Y			95.1%
EQUIVALENT SOIL-IN-GROUND	•	4.06 yd3	78.3 yd³	82.3 yd3/day
EGGIANCEN! 2015 IN GHOOMS		•		
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	TE)			
TOTAL	. = ,	16,449 kBq		
MAXIMUM/SORT		772 kBq		
MINIMUM/SORT		2.2 kBq		
MINIMON/SORT		•		
DISPERSED + PARTICLE (REALISTIC ES	STIMATE) ACTIVITY	10,975 kBq	9,062 k8q	
MAXIMUM/SORT		598 kBq	18 kBq	
MINIMUM/SORT		0 Bq	-9 kBq	
SPECIFIC ACTIVITY		2,141 Bq/kg	92 Bq/1	(g
St Coll 10 No. 1111				
WORK HISTORY				
WORK DAY START	06:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	MA 00:60	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:17 AM	END SOIL PROCESSING		
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr	
		11.5 hr		
WORK HOURS		11.5 hr		
AVAILABLE HOURS	JRS (total 20-sec records)	10.77 hr		
	JKS (total 20-sec records)	0.73 hr		
DOWN-TIME TOTAL SYSTEM PAUSE		0.40 hr		
***************************************		0.0 hr		
NONAVAILABLE HOURS	•	0.30 hr		
START-UP		0.32 hr		
SHUT-DOWN		93.6%		
PLANT PERFORMANCE PRODUCTIVITY		93.6%		
PRODUCTIVITI				
TOTAL SOIL PROCESSING RECORDS (2-S	SEC and 20-SEC)	2,944		
NONPROCESS RECORDS (Test, calibrat	ion, etc)	25	-	
20-SEC PROCESS RECORDS		1,938		
TOTAL SORT		74 MD>0 & MND=0		
NO SORT		1,057 AD=0 & MD=0 &		
SOME SORT		807 AD>0&0 <md<mnd< td=""><td>max&amp;MND <mndmax< td=""><td></td></mndmax<></td></md<mnd<>	max&MND <mndmax< td=""><td></td></mndmax<>	
UNEXPLAINED RECORD	S	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	1		UNEXPLAIN	PAUSE
AD=0 &	MD 0		TIME	TIME
AD<0 &	MD 0		07:48:53	05:53
ACT_P <5 kBq	264 26.2%			

Printed on 05/22/93 at 11:15:15 AM

2-SEC COUNT PERIODS	19,3	880
2-SEC RECORDS WITH SORTS	- 1,0	006 (ACT_P >0 kBq)
2-SEC RECORDS WITH POSITIVES	IN >1 DETECT	ror
2 DETECTORS	226	81.3%
3 DETECTORS	40	14.4%
4 DETECTORS	10	3.6%
5 DETECTORS	1	0.4%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL	2	278
NET 2-SEC RECORDS WITH SORTS	7	<b>7</b> 8
2-SEC PERIODS WITH NO SORTS	18,6	52
AVG TIME BETWEEN 2-SEC SORTS	53	.2 sec

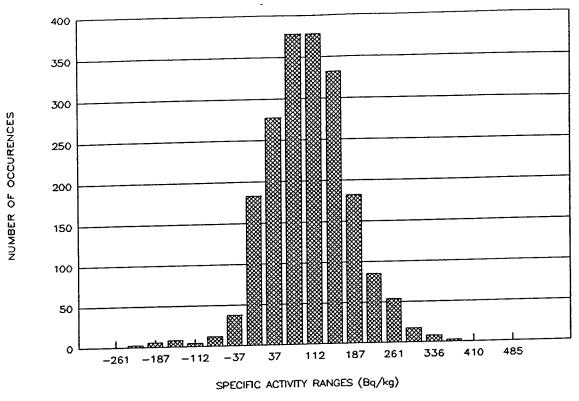
1-GATE S	ORTS	519	ACT_ND	NUMBER	SPEC A	ACT P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)		(Bq/kg)	(Bq)	(#)		(kBq)
DEVESTI			ν- 4,	••	( - <b></b>	. ,			
1	31	6.0%	-14000	0	-261	4000	116	11.5%	4
2	75	14.5%	-12000	2	-224	8000	405	40.3%	8
3	97	18.7%	-10000	5	-187	12000	175	17.4%	12
4	94	18.1%	-8000	8	-149	16000	85	8.4%	16
5	113	21.8%	-6000	4	-112	20000	41	4.1%	20
6	70	13.5%	-4000	12	-75	24000	41	4.1%	24
7	33	6.4%	-2000	37	-37	28000	26	2.6%	28
8	6	1.2%	0	183	0	32000	20	2.0%	32
TOTAL	519		2000	277	. 37	36000	18	1.8%	36
			4000	378	75	40000	10	1.0%	40
2-GATE SO	ORTS	487	6000	378	112	44000	8	0.8%	44
DETECTR	SORTS	FREQ%	8000	332	149	48000	7	0.7%	48
8			10000	182	187	52000	6	0.6%	52
9	60	12.3%	12000	85	224	56000	7	0.7%	56
10	80	16.4%	14000	54	261	60000	2	0.2%	60
11	90	18.5%	16000	17	299	64000	7	0.7%	64
12	98	20.1%	18000	8	336	68000	4	0.4%	68
13	90	18.5%	20000	2	373	72000	5	0.5%	72
14	50	10.3%	22000	0	410	76000	1	0.1%	76
15	19	3.9%	24000	0	448	80000	0	0.0%	80
TOTAL	487		26000	0	485	84000	2	0.2%	84
			>28000	0	0	>84000	20	2.0%	>84
			TOTAL	1964		TOTAL	1006		
SUMMARY T	OTALS								
но	T PARTICL	E EVENTS	978		SORTS BY	ONE GATE ONLY	519		
MU	LTIPARTIC	LE EVENTS	1462		SORTS BY	TWO GATES	487		
DI	STRIBUTED	EVENTS	5206						

#### REC CODE EXPLANATION

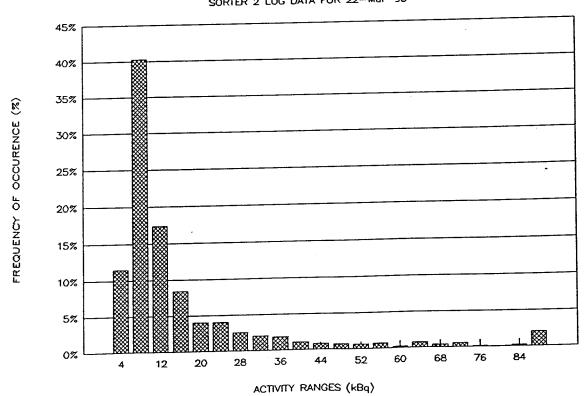
- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

# CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 22-Mor-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 22-Mor-93



SORTER 1 20-Mar-93				
AVERAGE BACKGROUND COUNT RATE	0.69 ± 0	.03 c/sec		
SORTER SOIL DENSITY	1.15 tons/m³	.03 0/300		
GROUND SOIL DENSITY	1.65 tons/m³			
GROUND SOIL DENSITY	1.05 (013/	CONTAMINATED	CLEAN	
MASS TOTAL		0.49 tons	49.9 tor	ne .
MAXIMUM/SORT		56.2 kg	53.6 kg	.5
MINIMUM/SORT		0.7 kg	48.9 kg	
WEIGHT RECOVERY OR VOLUME RECOVE	RY		70 ( "	99.0%
EQUIVALENT SOIL-IN-GROUND		0.39 yd <sup>3</sup>	39.6 yd³	40.0 yd3/day
PARTICLE ACTIVITY (MAXIMUM ESTIM	IATE)			
TOTAL		5,043 kBq		
MAXIMUM/SORT.		186 kBq		•
MINIMUM/SORT		2.8 kBq		
DISPERSED + PARTICLE (REALISTIC	ESTIMATE) ACTIVITY	2,281 kBq	1,238 kBq	
MAXIMUM/SORT		133 k8q	17 kBq	
MINIMUM/SORT		-21618 Bq	-9 kBq	
SPECIFIC ACTIVITY		4,640 Bq/kg	25 Bq/	kg
WORK HISTORY				
WORK DAY START	05:50 AM	WORK DAY END	05:30 PM	
PLANT START-UP	05:55 AM	PLANT SHUT-DOWN	11:37 AM	
START SOIL PROCESSING	06:19 AM	END SOIL PROCESSING	11:33 AM	
LUNCH START	12:00 PM	LUNCH PERIOD	0.5 hr	
HODY HOUSE		11.2 hr		
WORK HOURS		5.7 hr		
AVAILABLE HOURS	OURS (total 30-one pagends)	5.23 hr		
	OURS (total 20-sec records)	0.47 hr		
DOWN-TIME TOTAL SYSTEM PAU:	ec.	0.41 hr		
NONAVAILABLE HOUI		5.5 hr		
START-UP		0.40 hr		
SHUT-DOWN		0.06 hr		
· PLANT PERFORMANCE	E	91.7%		
PRODUCTIVITY		46.8%		
TOTAL SOIL PROCESSING RECORDS (2-		1,290		
NONPROCESS RECORDS (Test, calibra	ation, etc)	14	٠	
20-SEC PROCESS RECORDS		941		
TOTAL SORT		2 MD>0 & MND=0		
NO SORT		657 AD=0 & MD=0 &		,
SOME SORT		282 AD>0&0 <md<mn0< td=""><td>maxemnu (Mnuma)</td><td><b>C</b></td></md<mn0<>	maxemnu (Mnuma)	<b>C</b>
UNEXPLAINED RECOR		0	4815701 4 4 4	DALICE
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		UNEXPLAIN	PAUSE
AD=0 8			TIME	TIME 05-55
. AD<0 8			09:05:34	05:55
ACT_P <5 kBq	100 28.7%		09:06:11	09:04

1

2-SEC COUNT PERIODS	9,410	
2-SEC RECORDS WITH SORTS	- 349	(ACT_P >0 kBq)
2-SEC RECORDS WITH POSITIVES	IN >1 DETECTOR	
2 DETECTORS	85	81.7%
3 DETECTORS	17	16.3%
4 DETECTORS	2	1.9%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL	104	
NET 2-SEC RECORDS WITH SORTS	245	
2-SEC PERIODS WITH NO SORTS	9,165	
AVG TIME BETWEEN 2-SEC SORTS	76.8	sec

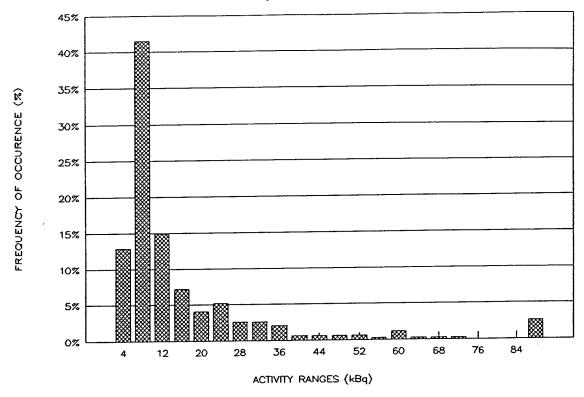
1-GATE S	ORTS	176	ACT_ND	NUMBER	SPEC_A	ACT_P		FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
									,
1	3	1.7%	-14000	0	-261	4000	45	12.9%	4
2	6	3.4%	-12000	1	-224	8000	145	41.5%	8
3	33	18.8%	-10000	1	-187	12000	52	14.9%	12
4	35	19.9%	-8000	4	-149	16000	25	7.2%	16
5	39	22.2%	-6000	13	-112	20000	14	4.0%	20
6	26	14.8%	-4000	40	-75	24000	18	5.2%	24
7	24	13.6%	-2000	132	-37	28000	9	2.6%	28
8	10	5.7%	0	190	0	32000	9	2.6%	32
TOTAL	176		2000	202	37	36000	7	2.0%	36
101112			4000	170	75	40000	2	0.6%	40
2-GATE SO	DRTS.	173	6000	93	112	44000	2	0.6%	44
DETECTR	SORTS	FREQ%	8000	59	149	48000	2	0.6%	48
8	555		10000	33	187	52000	2	0.6%	52
9	5	2.9%	12000	13	224	56000	1	0.3%	56
10	15	8.7%	14000	3	261	60000	4	1.1%	60
11	38	22.0%	16000	0	299	64000	1	0.3%	64
12	38	22.0%	18000	1	336	68000	1	0.3%	68
13	35	20.2%	20000	0	373	72000	1	0.3%	72
14	21	12.1%	22000	0	410	76000	0	0.0%	76
15	21	12.1%	24000	0	448	80000	0	0.0%	80
TOTAL	173		26000	0	485	84000	0	0.0%	84
TOTAL	113		>28000	0	0	>84000	9	2.6%	>84
			TOTAL	955		TOTAL	349		
SUMMARY 1	COTALS								
		LE EVENTS	337		SORTS BY	ONE GATE ONLY	176		
• • • • • • • • • • • • • • • • • • • •		CLE EVENTS	227			TWO GATES	173		
			166		23110 01				
D	STRIBUTE	1 FAFM12	100						

### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

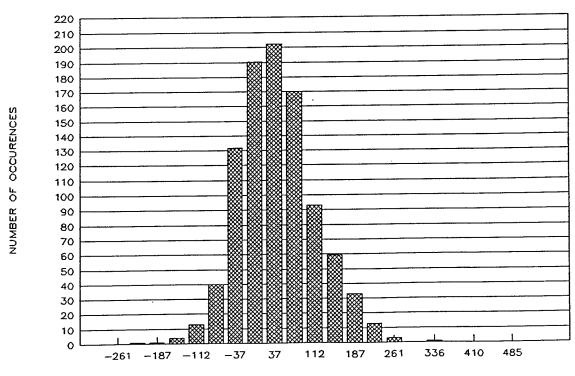
# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 20-Mar-93



# CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 20-Mor-93



SPECIFIC ACTIVITY RANGES (Bq/kg)

SORTER 2 20-Mar-93	•			
AVERAGE BACKGROUND COUNT RATE	0.77 ±	0.06 c/sec		
SORTER SOIL DENSITY	1.15 tons/m	1 <sup>3</sup>		
GROUND SOIL DENSITY	1.65 tons/∏	1 <sup>3</sup>	o. 544	
GROUND SUIL DENSITY		CONTAMINATED	CLEAN	
		0.59 tons	50.2 tons	
MASS TOTAL		53.6 kg	53.6 kg	
MAXIMUM/SORT		0.7 kg	45.5 kg	
MINIMUM/SORT				
TO NOT THE BECOVERY				98.8%
WEIGHT RECOVERY OR VOLUME RECOVERY		0.46 yd³	39.8 yd3	40.3 yd3/day
EQUIVALENT SOIL-IN-GROUND				
CHANTEN CHANTER ESTIMATE	<b>)</b>			
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	,	8,644 kBq		•
TOTAL		431 kBq		
MAXIMUM/SORT		2.3 kBq		
MINIMUM/SORT				
The second section of the second section secti	IMATEL ACTIVITY	4,057 kBq	3,861 kBq	
DISPERSED + PARTICLE (REALISTIC EST	IMAIL) NOTITION	367 kBq	17 kBq	
MAXIMUM/SORT		0 Bq	-7 kBq	
MINIMUM/SORT		6,915 Bq/kg	77 Bq/kg	
SPECIFIC ACTIVITY		•		
WORK HISTORY		LIGHT BAY FUD	05:30 PM	
WORK DAY START	05:50 AM	WORK DAY END	11:37 AM	
PLANT START-UP	05:55 AM	PLANT SHUT-DOWN		
START SOIL PROCESSING	06:19 AM	END SOIL PROCESSING	0.5 hr	
LUNCH START	12:00 PM	LUNCH PERIOD	0.5	
		11.2 hr		
WORK HOURS		5.7 hr		
AVAILABLE HOURS		7 1		
ACTUAL PROCESS HOUR	S (total 20-sec records	0.43 hr		
DOWN-TIME		0.39 hr		
TOTAL SYSTEM PAUSE		5.5 hr		
NONAVAILABLE HOURS		0.40 hr		
START-UP		0.04 hr		
SHUT-DOWN		92.4%		
PLANT PERFORMANCE		47.2%		
PRODUCTIVITY		47.24		
	-c and 20-SEC)	1,392		
TOTAL SOIL PROCESSING RECORDS (2-S	C and 20-3cc)	9		
NONPROCESS RECORDS (Test, calibrat	ion, etc)	948		
20-SEC PROCESS RECORDS		1 MD>0 & MND=0	)	
TOTAL SORT		569 AD=0 & MD=0		
NO SORT		378 AD>0&0 <md<mi< td=""><td>IDmax&amp;MND<mndmax< td=""><td></td></mndmax<></td></md<mi<>	IDmax&MND <mndmax< td=""><td></td></mndmax<>	
SOME SORT	_	0		
UNEXPLAINED RECORD		-	UNEXPLAIN	PAUSE
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		TIME	TIME
& 0=QA	_		None	05:55
AD<0 &				
ACT_P <5 kBq	115 25.9%			

Printed on 03/22/93 at 08:41:31 AM

2-SEC CO	UNT PERIODS				9,480		
	2-SEC RECORE	S WITH S	ORTS	•	444	(ACT_P	>0 kBq)
	2-SEC RECOR	OS WITH P	OSITIVES	IN >1 DE	TECTOR		
		2 DETECTO	RS	106		84.8%	
	:	3 DETECTO	RS	18		14.4%	
	4	4 DETECTO	RS	1		0.8%	
	9	DETECTO	RS	0		0.0%	
	(	S DETECTO	RS	0		0.0%	
	;	7 DETECTO	RS	0		0.0%	
	8	B DETECTO	RS	0		0.0%	
	1	TOTAL			125		
	NET 2-SEC RE	CORDS WI	TH SORTS		319		
	2-SEC PERIO	S WITH NO	SORTS		9,161		
	AVG TIME BET	rween 2-si	EC SORTS		59.4	sec	
-GATE SORTS	226	ACT_ND	NUMBER	SPEC_A		AC	T_P
				10 - 11 - 3			'D~\

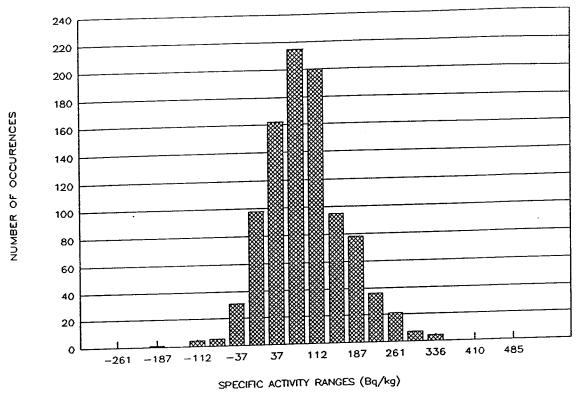
1-GATE S	ORTS	226	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	5	2.2%	-14000	0	-261	4000	53		4
2	29	12.8%	-12000	0	-224	8000	161	36.3%	8
3	47	20.8%	- 10000	1	-187	12000	63	14.2%	12
4	41	18.1%	-8000	0	-149	16000	43		16
5	39	17.3%	-6000	4	-112	20000	28	7	20
6	38	16.8%	-4000	5	-75	24000	13		24
7	23	10.2%	-2000	31	-37	28000	13	2.9%	28
8	4	1.8%	0	98	0	32000	8	1.8%	32
TOTAL	226		2000	162	37	36000	9	2.0%	36
			4000	215	75	40000	8	1.8%	40
2-GATE S	ORTS	218	6000	200	112	44000	6	1.4%	44
DETECTR	SORTS	FREQ%	8000	95	149	48000	3	0.7%	48
8			10000	78	187	52000	2	0.5%	52
9	13	6.0%	12000	36	224	56000	3	0.7%	56
10	42	19.3%	14000	21	261	60000	8	1.8%	60
11	33	15.1%	16000	7	299	64000	4	0.9%	64
12	44	20.2%	18000	4	336	68000	1	0.2%	68
13	41	18.8%	20000	0	373	72000	5	1.1%	72
14	34	15.6%	22000	0	410	76000	1	0.2%	76
15	11	5.0%	24000	0	448	80000	0	0.0%	80
TOTAL	218		26000	0	485	84000	0	0.0%	84
			>28000	0	0	>84000	12	2.7%	>84
			TOTAL	957		TOTAL	444		
SUMMARY	TOTALS								
	OT PARTICI	LE EVENTS	426		SORTS BY	ONE GATE ONLY	226		
		CLE EVENTS	374		SORTS BY	TWO GATES	218		
	ISTRIBUTED		73						
-									

### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

# CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2\_LOG DATA FOR 20-Mar-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 20-Mor-93

40% 35% FREQUENCY OF OCCURENCE (%) 30% 25% 20% 15% 10% 5% 0% 84 68 76 60 52 28 36 20 12 ACTIVITY RANGES (kBq)

A-292

SORTER 1 19-Mar-93	_						
AVERAGE BACKGROUND COUNT RATE		0.70 ±	0.04 c/s	ec			
SORTER SOIL DENSITY		1.15 tons	s/m³				
GROUND SOIL DENSITY		1.65 tons	s/m³				
			CON	TAMINATED	CLEAN		
MASS TOTAL			1	.18 tons	100.8	tons	
MAXIMUM/SORT			5	6.2 kg	53.6	kg	
MINIMUM/SORT				0.7 kg	45.5	kg	
WEIGHT RECOVERY OR VOLUME RECOVER	RY						98.8%
EQUIVALENT SOIL-IN-GROUND			0	.94 yd³	79.9	yd3	80.8 yd3/day
PARTICLE ACTIVITY (MAXIMUM ESTIMA	NTE)						
TOTAL			16,	871 kBq			
MAXIMUM/SORT			1,	320 kBq			
MINIMUM/SORT				2.4 kBq			
DISPERSED + PARTICLE (REALISTIC E	ESTIMATE) ACTIVI	ΤΥ	7,	229 kBq	3,465	kBq	
MAXIMUM/SORT			1	034 kBq		kBq	
MINIMUM/SORT				0 Bq ´	-12	kBq	
SPECIFIC ACTIVITY			6,	111 Bq/kg	34	Bq/kg	
WORK HISTORY							
WORK DAY START	06:00 AM		WOR	C DAY END	05:30 PM		
PLANT START-UP	06:00 AM		PLA	NT SHUT-DOWN	05:30 PM		
START SOIL PROCESSING	06:18 AM		END	SOIL PROCESSING	05:04 PM		
LUNCH START	12:00 PM		LUN	CH PERIOD	0.0	hr	
WORK HOURS				11.5 hr			
AVAILABLE HOURS				11.5 hr			
ACTUAL PROCESS HO	OURS (total 20-se	ec record	ls)	10.57 hr			
DOWN-TIME				0.93 hr			
TOTAL SYSTEM PAUS	E			0.60 hr			
NONAVATLABLE HOUR	ıs .			0.0 hr			
START-UP				0.31 hr			
SHUT-DOWN				0.42 hr			
PLANT PERFORMANCE	•			91.9%			
PRODUCTIVITY		•		91.9%			
TOTAL SOIL PROCESSING RECORDS (2-	SEC and 20-SEC)			2,906			
NONPROCESS RECORDS (Test, calibra	ition, etc)			8			
20-SEC PROCESS RECORDS			1,9	203			
TOTAL SORT				3 MD>0 & MND=0			
NO SORT			1,3	254 AD=0 & MD=0	& MND>0		
SOME SORT			(	546 AD>0&0 <md<mn< td=""><td>Dmax&amp;MND<mi< td=""><td>NDmax</td><td></td></mi<></td></md<mn<>	Dmax&MND <mi< td=""><td>NDmax</td><td></td></mi<>	NDmax	
UNEXPLAINED RECOR	DS			0			
0 <ad<1kbq &="" md="">0</ad<1kbq>	5				UNEXPLAII	N I	PAUSE
AD=0 &	. MD 0				TIME		TIME
& 0>0A	MD 0				07:46:06		05:54
ACT P <5 kBq	293	29.2%			09:43:26		06:51

	_				1	9,030				11	:14:06	11:31
2-	SEC COUNT			OTC.			(ACT P	>0 kBq)		13	5:21:09	11:32
	2-	SEC RECORDS	MILH SO	KIS CITIVES				•		16	5:40:09	12:23
	2-	SEC RECORDS			218	2010	75.4%					12:24
			DETECTOR		52		18.0%					12:26
			DETECTOR		15		5.2%					
			DETECTOR		3		1.0%					
			DETECTOR				0.0%					
			DETECTOR		0		0.0%					
			DETECTOR		0		0.0%					
		8	DETECTOR	rs .	0	200	0.0%					
			DTAL			289						
		ET 2-SEC RE				714						
		-SEC PERIOD			•	18,316						
	A	VG TIME BET	WEEN 2-SE	C SORTS		53.3	sec					
								ACT_P	SORT	FREQ%	ACT_P	
1-GATE S	ORTS	500	ACT_ND		SPEC_A			(Bq)	(#)	•	(kBq)	
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(BQ)	()		•	
				•	241			4000	152	15.2%	4	
1	8	1.6%	-14000	0	-261			8000	405	40.4%	8	
2	50	10.0%	-12000	2	-224			12000	154	15.4%	12	
3	84	16.8%	-10000	1	-187			16000	77	7.7%	16	
4	114	22.8%	-8000	2	-149			20000	48	4.8%	20	
5	96	19.2%	-6000	7	-112 			24000	35	3.5%	24	
6	, <b>7</b> 0	14.0%	-4000	67	-75			28000	22	2.2%	28	
7	64	12.8%	-2000	199	-37			32000	17	1.7%	32	
8	14	2.8%	0	334	0			36000	17	1.7%	36	
TOTAL	500		2000	432	37			40000	7	0.7%	40	
			4000	379	75 443			44000	6	0.6%	44	
2-GATE S	ORTS	503	6000	256	112			48000	5	0.5%	48	
DETECTR	SORTS	FREQ%	8000	137	149			52000	5	0.5%	52	
8			10000	59	187			56000	7	0.7%	56	
9	21	4.2%	12000	24	224			60000	6	0.6%	60	
10	67	13.3%	14000	6	261			64000	9	0.9%	64	
11	110	21.9%	16000	6	299			68000	6		68	
12	102	20.3%	18000	0	336			72000	2		72	
13	83	16.5%	20000	0	373			76000	2		76	
14	70	13.9%	22000	0	410			80000	0		80	
15	50	9.9%	24000	0	448			84000	2		84	
TOTAL	503		26000	0					19		>84	
			>28000	0				>84000	1003			
			TOTAL	1911				TOTAL	1003			
SUMMARY							ATE OU	ı <b>v</b>	500			
		CLE EVENTS	990		SORTS BY			<b>-</b> 1	503			
		ICLE EVENTS	526		SORTS BY	I WO	WIE9		,,,			
t	ISTRIBUTE	ED EVENTS	249									

### REC CODE EXPLANATION

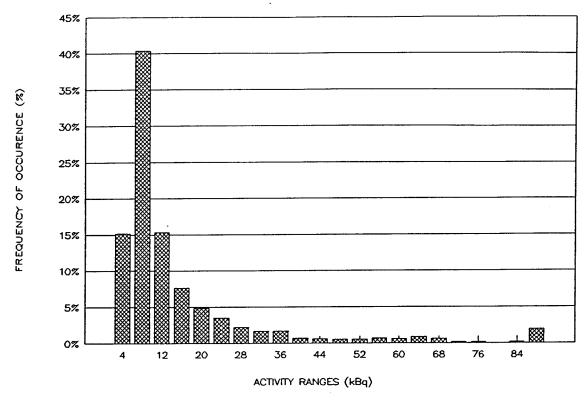
1.00 Source check (Soil on belt)

2.00 Empty belt

3.00 Test (No process soil)

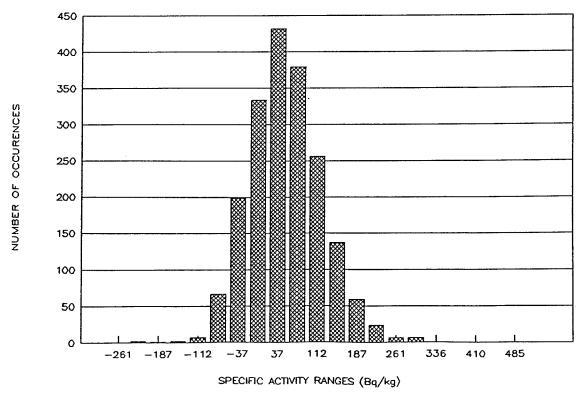
# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 19-Mar-93



### CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 19-Mar-93



AVERAGE BACKGROUND COUNT RATE  0.78	SORTER 2 19-Mar-93				
AMERICAL BRILLIAN CORN MAN.  GROUND SOIL DENSITY  1.55 tons/m²  GROUND SOIL DENSITY  1.55 tons/m²  GROUND SOIL DENSITY  1.55 tons/m²  CONTAMINATED  CLEAN  1.52 tons  100.0 tons  5.62 kg 53.6 kg  48.2 kg  88.5%  MAXIMM/SORT  MAXIMM/SORT  LIEIGHT RECOVERY OF VOLUME RECOVERY  EQUIVALENT SOIL-IN-GROUND  PARTICLE ACTIVITY (MAXIMUM ESTIMATE)  TOTAL  MAXIMM/SORT  AMAXIMM/SORT  MAXIMM/SORT  AMAXIMM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMM/SORT  MAXIMM/SORT  MORK DAY START	SURTER 2. 17 Hot 73	-			
CONTAMINATED   CLEAN   CONTAMINATED   CONTAMINATED   CLEAN   CONTAMINATED   CLEAN   CLEA	AVERAGE BACKGROUND COUNT RATE	<b>3.,</b> 5	.04 c/sec		
CONTANINATED CLEAN  MAXIMAM/SORT  MAXIMAM/SORT  MINIMUM/SORT  METERIC RECOVERY OF VOLUME RECOVERY  EQUIVALENT SOIL-IM-GROUND  PARTICLE ACTIVITY (MAXIMAM ESTIMATE)  TOTAL  MAXIMAM/SORT  MAXIMAM/SORT  MAXIMAM/SORT  MAXIMAM/SORT  MAXIMAM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMAM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMAM/SORT  MAXIMAM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMAM/SORT  MAXIMAM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMAM/SORT  MOKE DAY START  MINIMAM/SORT  MOKE DAY START  MOCK DAY ST	SORTER SOIL DENSITY	1.15 tons/m³			
MAXIMUM/SORT  MINIMUM/SORT  MEIGHT RECOVERY OR VOLUME RECOVERY  EQUIVALENT SOIL-IN-GROUND  PARTICLE ACTIVITY (MAXIMAN ESTIMATE)  TOTAL  MAXIMAN/SORT  MAXIMAN/SORT  MAXIMAN/SORT  MAXIMAN/SORT  MINIMAN/SORT  MAXIMAN/SORT  MAXIMA	GROUND SOIL DENSITY	1.65 tons/m³		0.5411	
MAST TOTAL  MAXIMM/SORT  MAXIMM/SORT  MEGOT RECOVERY OR VOLUME RECOVERY  EQUIVALENT SOIL-IN-GROUND  PARTICLE ACTIVITY (MAXIMM ESTIMATE)  TOTAL  MAXIMM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMM/SORT  MINIMM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMM/SORT  MAXIMM/SORT  MORE DAY START  MORE					
MAXIMM/SORT  MEIGHT RECOVERY OR VOLUME RECOVERY  EQUITALENT SOIL-IN-GROUND  PARTICLE ACTIVITY (MAXIMUM ESTIMATE)  TOTAL  MAXIMM/SORT  M	MASS TOTAL				ns
MINIMON/SORT  EQUIVALENT SOIL-IN-GROUND  PARTICLE ACTIVITY (MAXIMUM ESTIMATE)  TOTAL  MAXIMUM/SORT  HINIMON/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  HINIMON/SORT  JOSEPH - START OBJOIN OF SORT OBJOIN OF SORT OBJOIN	MAXIMUM/SORT		<u>-</u>	_	
	MINIMUM/SORT		0.7 kg	48.2 kg	
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)  TOTAL  MIXIMUM/SORT  MINIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  SPECIFIC ACTIVITY  MORK DAY START  MORK DAY	WEIGHT RECOVERY OR VOLUME RECOVER	Υ			
TOTAL  **MAXIMUM/SORT  **MAXIMUM/SORT  **DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  **DISPERS			1.21 yd³	79.3 yd	s 80.5 yd3/day
TOTAL  **MAXIMUM/SORT  **MAXIMUM/SORT  **DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  **DISPERS	CARTICLE ACTIVITY (MAYIMIM FSTIMA	TE)			
MAXIMUM/SORT  MINIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  MAXIMUM/SORT  MINIMUM/SORT  SPECIFIC ACTIVITY  MORK DAY START		,	15,046 kBq		
## NINHUM/SORT 2.7 kBq  DISPERSED + PARTICLE (REALISTIC ESTINATE) ACTIVITY 7,421 kBq 8,736 kBq  MAXIMUM/SORT 566 kBq 18 kBq -5510 Bq -7 kBq  MINIMUM/SORT 5510 Bq -7 kBq  MORK DAY START 06:00 AM 4,875 Bq/kg 87 Bq/kg  WORK DAY START 06:00 AM 140RK DAY END 05:30 PM  PLANT START-UP 06:00 AM 140RK DAY END 05:30 PM  PLANT START-UP 06:00 AM 140RK DAY END 05:30 PM  LUNCH START 12:00 PM 140RC PRIOCESSING 05:03 PM  LUNCH START 12:00 PM 140RC PRIOCESSING 05:03 PM  LUNCH START 11:5 hr  ACTUAL PROCESS HOURS (total 20-sec records) 10.52 hr  DOWN-TIME 0.98 hr  TOTAL SYSTEM PAUSE 0.64 hr  NONAVAILABLE HOURS 11.5 hr  NONAVAILABLE HOURS 0.04 hr  START-UP 0.31 hr  SHUT-DOWN 0.43 hr  PLANT PERFORMANCE 91.5%  PRODUCTIVITY 91.5%  TOTAL SOIL PROCESSING RECORDS (2-sec and 20-sec) 2,695  NOMPROCESS RECORDS (1est, calibration, etc) 10  20-sec PROCESS RECORDS (2-sec and 20-sec) 2,695  NOMPROCESS RECORDS (1est, calibration, etc) 10  SOME SORT 100F AMD 0 & MND-0  SOME SORT 100F AMD 0 & MND-0  SOME SORT 100F AMD 0 & MND-0  UNEXPLAINED RECORDS 0 1  UNEXPLAINED RECORDS 0 1  UNEXPLAINED RECORDS 0 1  UNEXPLAINED RECORDS 0 1  UNEXPLAINED RECORDS 0 0 554  11:48:47 05:54  11:48:47 05:54			678 kBq		
DISPERSED + PARTICLE (REALISTIC ESTINATE) ACTIVITY  MAXIMUM/SORT SPECIFIC ACTIVITY  WORK DAY START O6:00 AM PLANT START-UP O6:00 AM START SOLI PROCESSING LUNCH START 12:00 PM  WORK HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOIN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SNUT-DOMN PLANT PERFORMANCE PRODUCTIVITY PRODUCTIVIT			·		
MAXIMUM/SORT   Security   Secur	MINITION/ SUK!		·		
MAXIMUM/SORT	DISDERSEN + DARTICLE (PFALISTIC F	STIMATE) ACTIVITY	7,421 kBq	8,736 kBd	4
MINIMUM/SORT  SPECIFIC ACTIVITY  WORK DAY START  MORK DAY END  MORK D			566 kBq	18 kBd	1
NORTH   NORT			-5510 Bq	-7 kBd	1
WORK HISTORY  WORK DAY START			· ·	87 Bq/	⁄kg
MORK DAY START   06:00 AM	Sherible Wellall				
PLANT START-UP   O6:00 AM	WORK HISTORY		LICOY DAY END	05-30 DM	
START SOIL PROCESSING   O6:18 AM	WORK DAY START				
LUNCH START 12:00 PM LUNCH PERIOD 0.0 hr  WORK HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) 11.5 hr ACTUAL PROCESS HOURS (total 20-sec records) 10.52 hr DOMN-TIME 0.98 hr TOTAL SYSTEM PAUSE 0.64 hr NONAVAILABLE HOURS 0.0 hr START-UP 0.31 hr SHUT-DOWN 0.43 hr PLANT PERFORMANCE 91.5% PRODUCTIVITY 91.5%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,695 NONPROCESS RECORDS 1,894  TOTAL SORT 8 MD>0 & MND=0  20-SEC PROCESS RECORDS 1,894  TOTAL SORT 1,067 AD=0 & MD=0 & MND>0  O <ad<1 &="" kg="" md="">0 1  AD=0 &amp; MD 2  AD=0 &amp; MD 2  AD=0 &amp; MD 2  DOSE 11:48:47 05:54  11:48:47 05:554  11:48:47 05:554  11:48:47 05:554  11:48:47 05:554  11:48:47 05:554  11:48:47 05:554  11:48:47 05:554  11:48:47 05:554  11:48:47 05:554</ad<1>	PLANT START-UP		-		
MORK HOURS	START SOIL PROCESSING		-		
AVAILABLE HOURS  AVAILABLE HOURS  ACTUAL PROCESS HOURS (total 20-sec records)  DOWN-TIME  TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOWN  SHUT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  20-SEC PROCESS RECORDS  TOTAL SOIL  TOTAL SOIT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0-AD-1kBq & MD>0  1	LUNCH START	12:00 PM	LUNCH PERIOD	0.0 111	
ACTUAL PROCESS HOURS (total 20-sec records)  ACTUAL PROCESS HOURS (total 20-sec records)  DOMN-TIME  TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOMN  PLANT PERFORMANCE  PRODUCTIVITY  DOMN-POCESS RECORDS (2-SEC and 20-SEC)  2,695  NONPROCESS RECORDS (Test, calibration, etc)  TOTAL SOIL PROCESSING RECORDS  TOTAL SORT  NO SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 < AD<1kBq & MD>0  1,067 AD=0 & MD=0 & MND>0  TIME  AD=0 & MD 2  TIME  TIME  TIME  TIME  11:48:47 05:54  12:25:41 06:51	WORK HOURS		11.5 hr		
DOWN-TIME  DOWN-TIME  TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY  DOWN-TIME  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  2,695  NONPROCESS RECORDS (2-SEC and 20-SEC)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 <ad<1 &="" kg="" md="">0  LINEY PAUSE  AD=0 &amp; MD 2  AD=0 &amp; MD</ad<1>	AVAILABLE HOURS		11.5 hr		
TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY   TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  2,695  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  1,894  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 < AD<1kBq & MD>0  1	ACTUAL PROCESS HO	URS (total 20-sec records)	10.52 hr		
NONAVAILABLE HOURS   0.0 hr	DOWN-TIME		0.98 hr		
START-UP  SHUT-DOWN  PLANT PERFORMANCE PRODUCTIVITY  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  2,695  NONPROCESS RECORDS (1est, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0  AD=0 & MD ≥  AD=0 & MD ≥  AD=0 & MD ≥  AD TIME  TIME  TIME  TIME  11:48:47  12:25:/11  13:25:/11  13:25:/11  14:57  15:51	TOTAL SYSTEM PAUS	E			
START-DOWN  SHUT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY  91.5%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  2,695  NONPROCESS RECORDS (1est, calibration, etc)  20-SEC PROCESS RECORDS  1,894  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 <ad<1kbq &="" md="">0  AD=0 &amp; MD 2  AD=0 &amp; MD 2  TIME  TIME  11:48:47  06:51</ad<1kbq>	NONAVAILABLE HOUR	s			
PLANT PERFORMANCE PRODUCTIVITY  91.5%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  2,695  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  1,894  TOTAL SORT  NO SORT  1,067 AD=0 & MD=0 & MND=0  1,067 AD=0 & MD=0 & MND>0  SOME SORT  UNEXPLAINED RECORDS  0 <ad<1kbq &="" md="">0  1 IME  AD=0 &amp; MD 2  AD&lt;0 &amp; MD 2  11:48:47  11:48:47  12:25:41  10  1.894  1.894  1.967 AD=0 &amp; MD=0 &amp; MND&gt;0  UNEXPLAIN PAUSE  TIME  TIME  11:48:47</ad<1kbq>	START-UP				
PRODUCTIVITY  91.5%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  2,695  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 <ad<1kbq &="" md="">0  AD=0 &amp; MD 2  AD=0 &amp; MD 2  11:48:47  12:25:41  10  2,695  10  1,894  8 MD&gt;0 &amp; MND=0  1,067 AD=0 &amp; MND=0  8 MD&gt;0 &amp; MND=0  1,067 AD=0 &amp; MD=0 &amp; MND&gt;0  UNEXPLAIN PAUSE  TIME  TIME  TIME  11:48:47  13:25:41  13:25:41  13:25:41  13:25:41  13:25:41  13:25:41  13:25:41  13:25:41  13:25:41  13:25:41  10  10  10  10  11:48:47  13:25:41  13:25:41  13:25:41  13:25:41  13:25:41  13:25:41  14:25:41  15:48:47  15:48  15:48  15:48  15:48  15:48  15:48  15:48  15:48  15:48  16:51</ad<1kbq>	SHUT-DOWN				
TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 < AD < 1 kBq & MD > 0 & MND = 0 & MND > 0	PLANT PERFORMANCE				
10   1,894   1,894   1,894   1,067 AD=0 & MND=0   1,067 AD=0 & MND=0 & MND=0   1,067 AD=0 & MD=0 & MND=0	PRODUCTIVITY		91.5%		
10   1,894   1,894   1,894   1,067 AD=0 & MND=0   1,067 AD=0 & MND=0 & MND=0   1,067 AD=0 & MD=0 & MND=0	TOTAL SOLI PROCESSING RECORDS (2-)	SEC and 20-SEC)	2,695		
1,894					
TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 < AD=0 & MD > 0  LINEXPLAIN PAUSE  AD=0 & MD  2			1,894		
NO SORT 1,067 AD=0 & MD=0 & MND>0  SOME SORT 819 AD>0&0 <md<mndmax&mnd<mndmax &="" 0="" md="" o<ad<1kbq="" records="" unexplained="">0 1 UNEXPLAIN PAUSE  AD=0 &amp; MD 2 TIME TIME  AD&lt;0 &amp; MD 2 11:48:47 05:54</md<mndmax&mnd<mndmax>	-		•		
SOME SORT  UNEXPLAINED RECORDS  0 < AD < 1 kBq & MD > 0  AD = 0 & MD			1,067 AD=0 & MD=0 &	MND>0	
UNEXPLAINED RECORDS 0  0 < AD < 1 kBq & MD > 0					nx .
0 <ad<1kbq &="" md="">0 1 UNEXPLAIN PAUSE  AD=0 &amp; MD 2 TIME TIME  AD&lt;0 &amp; MD 2 11:48:47 05:54</ad<1kbq>		os	0		
AD=0 & MD 2 TIME TIME AD<0 & MD 2 11:48:47 05:54				UNEXPLAIN	
AD<0 & MD 2 11:48:47 05:54	•			TIME	
12.25./1 06.51	•			11:48:47	
				12:25:41	06:51

Printed on 03/21/93 at 07:23:33 PM

2.	-SEC COUN	T PERIODS				18,940				1	2:32:04
_		-SEC RECORD	S WITH SO	ORTS	-	801	(ACT_P	>0 kBq)			2:33:08
		-SEC RECORD			IN >1 DE	TECTOR				1	2:35:38
			DETECTOR		183		81.7%				
			DETECTOR		38		17.0%				
		4	DETECTOR	RS	3		1.3%				
			DETECTOR		0		0.0%				
			DETECTOR		0		0.0%				
			DETECTOR		0		0.0%				
			DETECTOR		0		0.0%				
			OTAL			224					
	4.	ET 2-SEC RE		TH SORTS		577					
		-SEC PERIOD				18,363					
		VG TIME BET				65.6	sec				
	A	AR 11WE DE1	MCEN 2-30	C SOKIS		03.0	000				
1-GATE S	ORTS	427	ACT_ND	NUMBER	SPEC_A		1	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(pg)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)
		, 79/	1/000	1	-261			4000	96	12.0%	4
1	20	4.7%	-14000	1	-201			8000	331	41.3%	8
2	75 	17.6%	-12000	0				12000	121	15.1%	12
3	73	17.1%	-10000	1	-187			16000	71	8.9%	16
4	86	20.1%	-8000	3	-149				42	5.2%	20
5	79	18.5%	-6000	4	-112			20000		2.2%	24
6	49	11.5%	-4000	12	-75			24000	18 23	2.9%	28
7	40	9.4%	-2000	49	-37			28000			32
8	5	1.2%	0	127	0			32000	16	2.0%	36
TOTAL	427		2000	239	37			36000	11	1.4%	30 40
			4000	422	75			10000	4	0.5%	
2-GATE S	ORTS	374	6000	397	112			44000	6	0.7%	44
DETECTR	SORTS	FREQ%	8000	329	149			48000	8	1.0%	48 53
8			10000	187	187			52000	2	0.2%	52
9	40	10.7%	12000	87	224			6000	4	0.5%	56 40
10	50	13.4%	14000	33	261			50000	9	1.1%	60
11	78	20.9%	16000	8	299			54000	8	1.0%	64 48
12	84	22.5%	18000	4	336			58000	1	0.1%	68 72
13	56	15.0%	20000	1	373			72000	0	0.0%	72 74
14	44	11.8%	22000	0	410			76000	0	0.0%	76
15	22	5.9%	24000	0	448			30000	2	0.2%	80
TOTAL	374		26000	0	485			34000	2	0.2%	84
			>28000	0	0			34000	26	3.2%	>84
			TOTAL	1904			1	TOTAL	801		
SUMMARY 1		LE EVENTS	767		SORTS BY	ONE G	TE ONLY	ſ	427		
			842		SORTS BY			•	374		
		CLE EVENTS			30K13 B1						
וט	STRIBUTE	D EACHI2	653								

### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

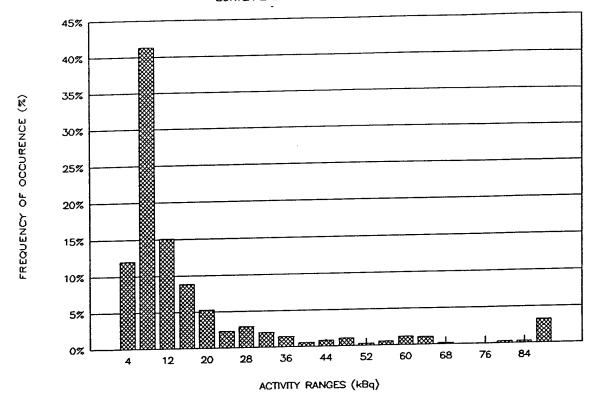
2.00 Empty belt

3.00 Test (No process soil)

12:24 12:26 12:30 12:32 12:33

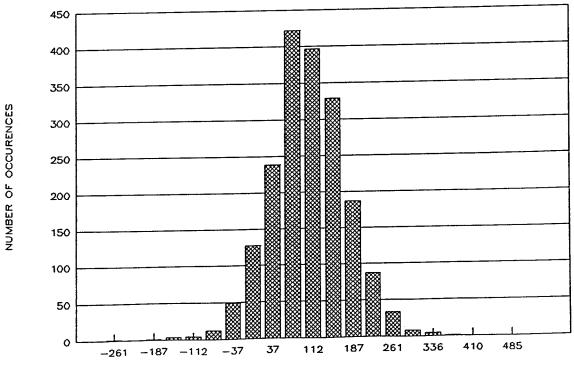
# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 19-Mar-93



# CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 19-Mar-93



SPECIFIC ACTIVITY RANGES (Bq/kg)

SORTER 1 18-Mar-93				
AVERAGE BACKGROUND COUNT RATE	0.70	t 0.02 c/sec		
SORTER SOIL DENSITY	1.15 tons	s/m³		
GROUND SOIL DENSITY	1.65 tons	s/m³		
GROOMD SOIL DEMSITY		CONTAMINATED	CLEAN	
MASS TOTAL		0.78 tons	101.5 tor	s
MAXIMUM/SORT		4.7 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	48.9 kg	
HIMITOTY				
WEIGHT RECOVERY OR VOLUME RECOVERY				99.2%
EQUIVALENT SOIL-IN-GROUND		0.62 yd3	80.4 yd³	81.1 yd3/day
ENGLANCENT 2015 : 11 THOUSE				
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)				
TOTAL		9,917 kBq		
MAXIMUM/SORT		303 k8q		,
MINIMUM/SORT		2.0 kBq		
DISPERSED + PARTICLE (REALISTIC ESTI	AATE) ACTIVITY	4,486 kBq	1,928 kBd	
MAXIHUM/SORT		233 kBq	15 kBc	I
MINIMUM/SORT		0 8q	-9 kBc	İ
SPECIFIC ACTIVITY		5,743 Bq/kg	19 Bq/	kg
<b>5. 251.15</b> 1151.5				
WORK HISTORY				
	05:55 AM	WORK DAY END	05:30 PM	
	05:55 AM	PLANT SHUT-DOWN	05:30 PM	
	06:27 AM	END SOIL PROCESSING	05:02 PM	
	11:30 AM	LUNCH PERIOD	0.0 hr	
WORK HOURS		11.6 hr		
AVAILABLE HOURS		11_6 hr		
ACTUAL PROCESS HOURS	(total 20-sec recor	ds) 10.60 hr		
DOWN-TIME		0.98 hr		
TOTAL SYSTEM PAUSE		0.52 hr		
NONAVAILABLE HOURS		0.0 hr		
START-UP		0.54 hr		
SHUT-DOWN		0.45 hr		
PLANT PERFORMANCE		-91.5%		
PRODUCTIVITY		91.5%		
TOTAL SOIL PROCESSING RECORDS (2-SEC	and 20-SEC)	2,636		
NONPROCESS RECORDS (Test, calibratio		4		
20-SEC PROCESS RECORDS		1,908		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		1,320 AD=0 & MD=0		
SOME SORT		588 AD>0&0<₩D	Dmax&MND <mndm< td=""><td>ЭX</td></mndm<>	ЭX
UNEXPLAINED RECORDS		. 0		DAUCE
0 <ad<1kbq &="" md="">0</ad<1kbq>	3		UNEXPLAIN	PAUSE
AD=0 & MD	0		TIME	TIME
AD<0 & MD	0		10:35:30	05:55
ACT_P <5 kBq	212 29.1%		12:57:30	

Printed on 05/22/93 at 10:20:10 AM

2	פבר רמ	INT PERIODS				19,080				1	4:35:10
2		2-SEC RECORD	S HITH S	ORTS			(ACT_P	>0 kBq)			
		2-SEC RECORD			IN >1 DET		_				
			DETECTO		168		88.0%				
			DETECTO		21		11.0%				
			DETECTO		2		1.0%				
					0		0.0%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
		_	DETECTO	<b>(5</b>	·	191	0.0.0				
			OTAL			537					
		NET 2-SEC RE									
		2-SEC PERIOD				18,543					
		AVG TIME BET	WEEN 2-SI	EC SORTS		71.1	sec				
1-GATE S	OPTS	363	ACT ND	NUMBER	SPEC_A			ACT_P	SORT	FREQX	ACT_P
	SORTS	FREQ%	(Bq)		(Bq/kg)			(Bq)	(#)		(kBq)
DETECTR	30K13	11,042	(-4/	• •							
4	2	0.6%	-14000	0	-261			4000	105	14.4%	4
1	24	6.6%	-12000	1	-224			8000	305	41.9%	8
2	49	13.5%	-10000	0	-187			12000	115	15.8%	12
3		20.1%	-8000	1	-149			16000	55	7.6%	16
4	73	22.3%	-6000	11	-112			20000	32	4.4%	20
5	81	17,9%	-4000	66	-75			24000	27	3.7%	24
6	65	14.3%	-2000	208	-37			28000	18	2.5%	28
7	52		0	442	0			32000	16	2.2%	32
8	17	4.7%	2000	524	37			36000	6	0.8%	36
TOTAL	363			368	75			40000	8	1.1%	40
		7/5	4000	199	112			44000	4	0.5%	44
2-GATE S		365	6000	51	149			48000	3	0.4%	48
DETECTR	SORTS	FREQ%	8000	25	187			52000	4	0.5%	52
8			10000		224			56000	5	0.7%	56
9	6	1.6%	12000	11 4	261			60000	2	0.3%	60
10	35	9.6%	14000					64000	4	0.5%	64
11	62	17.0%	16000	1	299			68000	2	0.3%	68
12	85	23.3%	18000	0	336			72000	0	0.0%	72
13	85	23.3%	20000	0	373			76000	1	0.1%	76
14	50	13.7%	22000	0	410				3	0.4%	80
15	42	11.5%	24000	0	448			80000	0	0.0%	84
TOTAL	365		26000	0	485			84000		1.8%	>84
			>28000	0	0			84000	13	1.04	704
			TOTAL	1912				TOTAL	728		
SUMMARY					SORTS BY	OVE C	TE (M)	v	363		
		ICLE EVENTS	727		SORTS BY			•	365		
		TICLE EVENTS	439		20K12 R1	INC G	1163				
Đ	ISTRIBU	TED EVENTS	0								

### REC CODE EXPLANATION

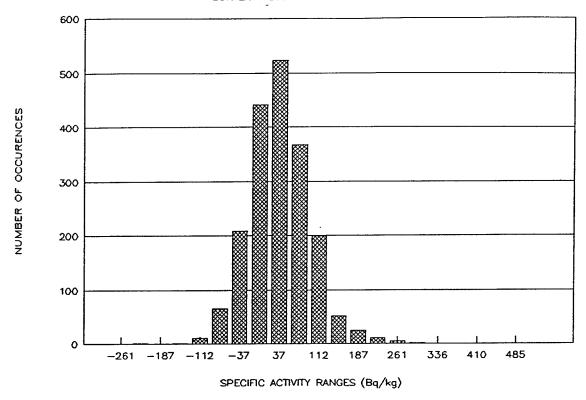
1.00 Source check (Soil on belt)

2.00 Empty belt

3.00 Test (No process soil)

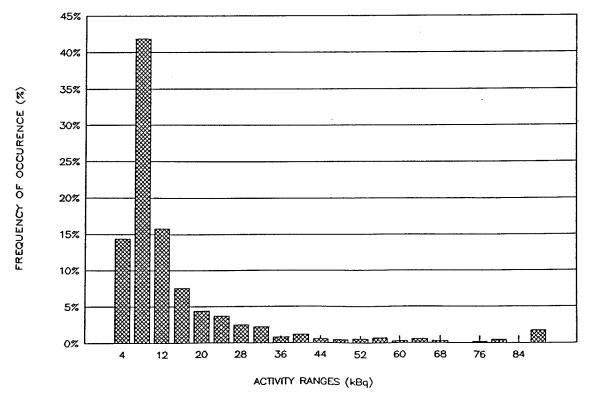
### CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 18-Mar-93



## JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 18-Mar-93



PARTICLE ACTIVITY (MAXIMUM ESTIMATE)  TOTAL  MAXIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  SPECIFIC ACTIVITY  MORK DAY START  MORK DAY START  MORK DAY START  DS:55 AM  PLANT START-UP  MORK HURS  AVAILABLE HOURS  ACTUAL PROCESS HOURS (total 20-sec records)  DOWN-TIME  TOTAL START-UP  SHUT-DOWN  PLANT START-UP  SHUT-DOWN  PLANT START-UP  SHUT-DOWN  PLANT START-UP  SHUT-DOWN  PLANT SHUT-D	SORTER 2 18-Mar-93	_			
SORTER SOIL DENSITY  1.65 tons/m²  GROUND SOIL DENSITY  1.65 tons/m²  1.06 tons  1.06 tons  91.1 tons  91.1 tons  91.1 tons  93.9%  98.	TOTAL DACKEROUND COUNT RATE	0.77 ± 0.	05 c/sec		
CONTAMINATED   CLEAN   1.06 tons   1.10 tons   1.06 tons   1.06 tons   1.10 tons   1.06		1.15 tons/m³			
MASS TOTAL  MAXIMUM/SORT  MAXIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  METGHT RECOVERY OR VOLUME RECOVERY  EQUIVALENT SOIL-IN-GROUND  PARTICLE ACTIVITY (MAXIMUM ESTIMATE)  TOTAL  MAXIMUM/SORT  MINIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MORK DAY SART  MORK DAY SAR		1.65 tons/m³		CLEAN	
MAXIMUM/SORT  HINIMUM/SORT  WEIGHT RECOVERY OR VOLUME RECOVERY  FEQUIVALENT SOIL-IN-GROUND  PARTICLE ACTIVITY (MAXIMUM ESTIMATE)  TOTAL  MAXIMUM/SORT  HINIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  HINIMUM/SORT  MAXIMUM/SORT  HINIMUM/SORT  MAXIMUM/SORT  MINIMUM/SORT  MAXIMUM/SORT  MINIMUM/SORT  MORK DAY START  MORK DAY START  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK HISTORY  WORK DAY START  MORK DAY START  MOR	GROUND SOIL DEMONS				
MAXIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  WEIGHT RECOVERY OR VOLUME RECOVERY  EQUIVALENT SOIL-IN-GROUND  PARTICLE ACTIVITY (MAXIMUM ESTIMATE)  TOTAL  MAXIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  MINIMUM/SORT  MORK HISTORY  WORK DAY START  MORK DAY START  PLANT START-UP  START SOIL PROCESSING  MORK HOURS  ACTUAL PROCESS HOURS (total 20-sec records)  DOWN-TIME  MORK HOURS  ACTUAL PROCESS HOURS  START-UP  SHOWLD AND ACTUAL PROCESSING  MORK DAY START  MORK DAY STEM PLANT START  MORK HOURS  ACTUAL PROCESS HOURS (total 20-sec records)  DOWN-TIME  TOTAL SYSTEM PAUSE  MONAVAILABLE HOURS  START-UP  SHOUT-DOWN  PLANT STEAT-UP  SHOWLD ACTUAL PROCESSING  MORK HOURS  START-UP  SHUT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY   MORE SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  2,325	MACS TOTAL				
MINIMUM/SORT  WEIGHT RECOVERY OR VOLUME RECOVERY EQUIVALENT SOIL-IN-GROUND  PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL HAXIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY HINHUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY HINHUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY HINHUM/SORT SPECIFIC ACTIVITY  WORK DAY START PLANT SHAT-UP START SOIL PROCESSING O6:27 AM LUNCH START  WORK HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOMN-TIME TOTAL HORK HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOMN-TIME TOTAL HORK HOURS START-UP SHUT-DOMN PLANT SHUT-DOMN PL			-		
MEIGHT RECOVERY OR VOLUME RECOVERY EQUIVALENT SOIL-IN-GROUND  PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL MAXIMUM/SORT LINIMUM/SORT HINIMUM/SORT HINIMUM/SORT HINIMUM/SORT HINIMUM/SORT HAXIMUM/SORT HAXI			0.7 kg	48.2 Kg	
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)  TOTAL  MAXIMUM/SORT  MINIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MORK DAY START  MORK DAY START  MORK DAY START  MORK DAY START  MORK BOATESSING  MORK DAY END  MORK DOS:30 PM  PLANT START-UP  MORK HOURS  AVAILABLE HOURS  AVAILABLE HOURS  ACTUAL PROCESS HOURS (total 20-sec records)  MORK DOWN-TIME  TOTAL SYSTEM PAUSE  MONAVAILABLE HOURS  START-UP  MONAVAILABLE HOURS  MONAVAILABLE HOURS  MORK DAY END  M					98.9%
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)  TOTAL  MAXIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MORK DAY START  MORK DAY START  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK HISTORY  MORK DAY START  MORK DAY START  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY START  MORK DAY START  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY BRQ  MORK DAY START  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY BRQ  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY BRQ  BRQ  MORK DAY BRQ  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY BRQ  MORK DAY BRQ  BRQ  MORK DAY BRQ  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY BRQ  MORK DAY BRQ  BRQ  MORK DAY BRQ  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY BRQ  MORK DAY BRQ  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY BRQ  MORK DAY BRQ  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY BRQ  MORK DAY BRQ  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY BRQ  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY BRQ  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY BRQ  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY BRQ  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY BRQ  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY BRQ  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY BRQ  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY BRQ  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY BRQ  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY BRQ  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY BRQ  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY BRQ  DISPERSED + PARTICLE (RE	WEIGHT RECOVERY OR VOLUME RECOVER	ſ	0 8% vd3	72.2 yd³	73.1 yd3/day
TOTAL  MAXIMUM/SORT  MINIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  MINIMUM/SORT  SPECIFIC ACTIVITY   WORK DAY START  MORK DAY START  MORK DAY START  DOS:555 AM  PLANT SHUT-DOWN  START SOIL PROCESSING  MORK DAY START  DOS:555 AM  PLANT SHUT-DOWN  DOS:30 PM  PLANT SHUT-DOWN  DOS:30 PM  END SOIL PROCESSING  DOWN-TIME  TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  ACTUAL PROCESS HOURS (total 20-sec records)  DOWN-TIME  TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY   EXTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  DOWN-TIME  1.55 hr  0.0 hr  0.47 hr  82.5%  PLANT SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  2,325	EQUIVALENT SOIL-IN-GROUND		0.04 /4		
TOTAL  MAXIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  117 kBq	THE ACTIVITY (MAYIMIM ESTIMA	(E)			
MAXIMUM/SORT   2.8 kBq		•	9,107 kBq		
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMM/SORT  MINIMUM/SORT  SPECIFIC ACTIVITY  WORK HISTORY  WORK DAY START  D5:55 AM  PLANT START-UP  START SOIL PROCESSING  MORK DAY START  11:30 AM  WORK DAY END  D5:30 PM  PLANT SHUT-DOWN  D5:30 PM  PLANT SHUT-DOWN  D5:30 PM  PLANT SHUT-DOWN  D5:30 PM  LUNCH PERIOD  D0:00 PM  LUNCH PERIOD  D0:00 PM		207 kBq			
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT MINIMUM/SORT SPECIFIC ACTIVITY  WORK HISTORY  MORK DAY START PLANT START-UP START SOIL PROCESSING LUNCH START  MORK HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP START-UP START-UP START-UP START-UP START-UP START-UP START-UP TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN START-UP SHUT-DOWN PLANT SPECERS HOURS (2-SEC and 20-SEC)  2,325			2.8 kBq		
117 kBq   19 kBq			/ 7// lo-	6 616 kBa	
MAXIHUM/SORT   0 Bq	DISPERSED + PARTICLE (REALISTIC E	STIMATE) ACTIVITY	•		
MINIMUM/SORT SPECIFIC ACTIVITY  WORK DAY START UNCK DAY START O5:55 AM PLANT START-UP START SOIL PROCESSING O6:27 AM LUNCH PERIOD O.0 hr  WORK HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) DOWN-TIME TOTAL SYSTEM PAUSE NONAVAILABLE HOURS START-UP SHUT-DOWN PLANT SHUT-DOWN SHUT-DOWN PLANT SHUT-DOWN BEND SOIL PROCESSING O5:30 PM PLANT SHUT-DOWN O5:30 PM END SOIL PROCESSING O5:02 PM LUNCH PERIOD O.0 hr  11.6 hr 11.6 hr 11.6 hr 11.5 hr 11.5 hr 10.0 hr 1.55 hr 0.0 hr 0.54 hr 0.94 hr 1.55 hr 0.94 hr 1.55 hr 1.56 hr 1.56 hr 1.56 hr 1.57 hr 1.57 hr 1.58 hr 1.58 hr 1.58 hr 1.58 hr 1.58 hr 1.58 hr				•	
WORK HISTORY  WORK DAY START  D5:55 AM  PLANT START-UP  START SOIL PROCESSING  WORK DAY END  START SOIL PROCESSING  WORK HOURS  AVAILABLE HOURS  ACTUAL PROCESS HOURS (total 20-sec records)  DOWN-TIME  TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY   WORK HOURS  11.6 hr  11.6 hr  11.6 hr  12.03 hr  1.55 hr  0.0 hr  0.147 hr  82.5%  PRODUCTIVITY   TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  2,325			•	·	a
WORK DAY START   05:55 AM	SPECIFIC ACTIVITY		4,300 BQ/K9	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	•
WORK DAY START 05:55 AM WORK DAY END 05:30 PM PLANT START-UP 05:55 AM PLANT SHUT-DOWN 05:30 PM START SOIL PROCESSING 06:27 AM END SOIL PROCESSING 05:02 PM LUNCH START 11:30 AM LUNCH PERIOD 0.0 hr  WORK HOURS 11.6 hr AVAILABLE HOURS 2.03 hr DOWN-TIME 10TAL SYSTEM PAUSE 1.55 hr NONAVAILABLE HOURS 1.55 hr NONAVAILABLE HOURS 0.0 hr START-UP 0.54 hr SHUT-DOWN 0.47 hr PLANT PERFORMANCE PRODUCTIVITY 82.5% PRODUCTIVITY 82.55%	THOR HISTORY				
PLANT START-UP 05:55 AM PLANT SHUT-DOWN 05:30 PM START SOIL PROCESSING 06:27 AM END SOIL PROCESSING 05:02 PM LUNCH START 11:30 AM LUNCH PERIOD 0.0 hr  WORK HOURS 11.6 hr AVAILABLE HOURS 11.6 hr DOWN-TIME 10.00 P.56 hr TOTAL SYSTEM PAUSE 0.00 hr START-UP 0.54 hr SHUT-DOWN 0.54 hr PLANT PERFORMANCE PRODUCTIVITY 82.5%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,325		05:55 AM			
START SOIL PROCESSING 06:27 AM END SOIL PROCESSING 05:02 TO LUNCH START 11:30 AM LUNCH PERIOD 0.0 hr  WORK HOURS 11.6 hr AVAILABLE HOURS 11.6 hr ACTUAL PROCESS HOURS (total 20-sec records) 9.56 hr DOWN-TIME TOTAL SYSTEM PAUSE 0.0 hr NONAVAILABLE HOURS 0.0 hr START-UP 0.54 hr SHUT-DOWN 0.47 hr PLANT PERFORMANCE PRODUCTIVITY 82.5%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,325					
LUNCH START   11:30 AM   LUNCH PERIOD		06:27 AM			
WORK HOURS		11:30 AM	LUNCH PERIOD	U.U Mr	
AVAILABLE HOURS  ACTUAL PROCESS HOURS (total 20-sec records)  DOWN-TIME  TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY  11.5 hr  2.03 hr  1.55 hr  0.0 hr  0.54 hr  0.47 hr  82.5%  82.5%			11.6 hr		
ACTUAL PROCESS HOURS (total 20-sec records)  DOWN-TIME  TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY  2.03 hr  1.55 hr  0.0 hr  0.54 hr  0.47 hr  82.5%  82.5%					
DOUN-TIME  TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOWN  SHUT-DOWN  PLANT PERFORMANCE PRODUCTIVITY   TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  2.325	AVAILABLE HOURS	une (total 20-sec records)	9.56 hr		
TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOWN  PLANT PERFORMANCE PRODUCTIVITY  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  1.55 nr  0.0 hr  0.47 hr  82.5%  82.5%		OK2 (total 20-sec 1 ccol 25)	2.03 hr		
NONAVAILABLE HOURS  START-UP  SHUT-DOWN  PLANT PERFORMANCE PRODUCTIVITY   10.0 NF  0.54 hr  0.47 hr  82.5%  82.5%  2,325		E	1.55 hr		
START-UP 0.54 hr SHUT-DOWN 0.47 hr SHUT-POWN 82.5% PLANT PERFORMANCE 82.5% PRODUCTIVITY 82.5%			0.0 hr		
SHUT-DOWN SHUT-DOWN 82.5% PLANT PERFORMANCE PRODUCTIVITY 82.5%  2,325		•	0.54 hr		
PLANT PERFORMANCE 82.5% PRODUCTIVITY 82.5%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,325					
PRODUCTIVITY  82.34  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  2,325			82.5%		
TOTAL COLL PROCESSING RECORDS (2-200 dim 20 200)			82.5%		
TOTAL COLL PROCESSING RECORDS (2-200 dim 20 200)		occ and 20-SEC)	2,325		
10	TOTAL SOIL PROCESSING RECORDS (2-	act divident	10		
NONPROCESS RECORDS (Test, calibration, etc)  1,720		ctor's eres	1,720		
20-SEC PROCESS RECORDS  4 MD>0 & MND=0			4 MD>0 & MND=0		
TOTAL SORT 1,056 AD=0 & MD=0 & MND>0			1,056 AD=0 & MD=0	& MND>0	
NO SORT 660 AD>0&0 <md<mndmax&mnd<mndmax< td=""><td></td><td></td><td>660 AD&gt;0&amp;0⊲MD⊲MN</td><td>Omax&amp;MND<mndmax< td=""><td>(</td></mndmax<></td></md<mndmax&mnd<mndmax<>			660 AD>0&0⊲MD⊲MN	Omax&MND <mndmax< td=""><td>(</td></mndmax<>	(
SOME SORT  UNEXPLAINED RECORDS  O  UNEXPLAIN PAUSE		ens	0		
OVEN THE SE MINO 1					
AD=0 & MD 0		_			
09:48:10 U5:55	•			09:48:10	
ACT_P <5 kBq 142 23.5%	• • • • • • • • • • • • • • • • • • • •				14:39

Printed on 05/22/93 at 10:36:15 AM

2	-SEC COL	INT PERIODS				17,200						15
-	000 000	2-SEC RECORD	S WITH S	ORTS	-	605	(ACT_P	>0 kBq)				
		2-SEC RECORD			IN >1 DE	TECTOR	_					
			DETECTO		140		87.0%					
			DETECTO		18		11.2%					
			DETECTO		3		1.9%					
		5	DETECTO	RS	0		0.0%					
		6	DETECTO	RS	0		0.0%					
		7	DETECTO	RS	0		0.0%					
		8	DETECTO	RS	0		0.0%					
			OTAL			161						
		NET 2-SEC RE	CORDS WI	TH SORTS		444						
		2-SEC PERIOD				16,756						
		AVG TIME BET				77.5	sec					
1-GATE S	ORTS	306	ACT_ND	NUMBER	SPEC_A		,	ACT_P	SORT	FREQ%	ACT_P	
DETECTR	SORTS	FREQ%	(Bq)		(Bq/kg)			(Bq)	(#)		(kBq)	
1	12	3.9%	-14000	0	-261			4000	60	9.9%	4	
2	62	20.3%	-12000	1	-224			8000	257	42.5%	8	
3	48	15.7%	-10000	1	-187		1	12000	82	13.6%	12	
4	70	22.9%	-8000	2	-149		1	16000	68	11.2%	16	
5	48	15.7%	-6000	2	-112		ä	20000	30	5.0%	20	
6	40	13.1%	-4000	20	-75		2	24000	20	3.3%	24	
7.	25	8.2%	-2000	62	-37			28000	8	1.3%	28	
8	1	0.3%	0	177	0		3	32000	13	2.1%	32	
TOTAL	306		2000	299	37		3	\$6000	7		36	
			4000	390	75			10000	8	1.3%	40	
2-GATE S	ORTS	299	6000	337	112			<b>4</b> 000	8	1.3%	44	
DETECTR	SORTS	FREQ%	8000	221	149			8000	5	0.8%	48	
8			10000	114	187			2000	2	0.3%	52	
9	37	12.4%	12000	53	224			6000	5	0.8%	56	-
10	54	18.1%	14000	22	261			50000	4	0.7%	60	
11	61	20.4%	16000	21	299			<b>54000</b>	5	0.8%	64	
12	55	18.4%	18000	6	336			8000	4	0.7%	68	
13	42	14.0%	20000	2	373			72000	5	0.8%	72	
14	37	12.4%	22000	0	410			76000	2	0.3%	76	
15	13	4.3%	24000	0	448			30000	2	0.3%	80 .	
TOTAL	299	•	26000	0	485			34000	0	0.0%	84	
			>28000	0	0			34000	10	1.7%	>84	
			TOTAL	1730			1	TOTAL	605			
SUMMARY					_			_	70/			
		CLE EVENTS	605		SORTS BY			r	306			
		ICLE EVENTS	654		SORTS BY	TWO GA	ITES		299			
D	ISTRIBUT	ED EVENTS	317									

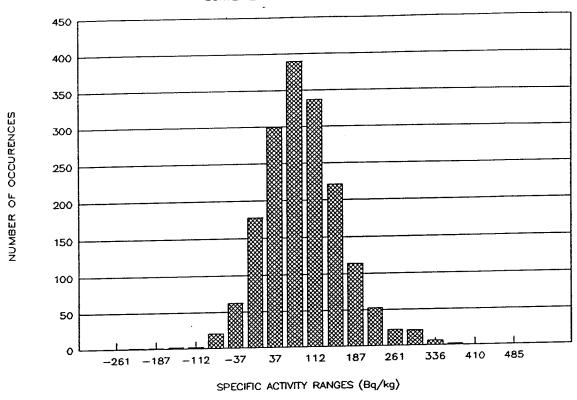
### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

15:42

# CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 18-Mar-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 18-Mar-93

45% 40% 35% FREQUENCY OF OCCURENCE (%) 30% 25% 20% 15% 10% 5% 0% 76 84 52 28 12 20

ACTIVITY RANGES (kBq)

SORTER 1 17-Mar-93					
AVERAGE BACKGROUND COUNT RATE		0.71 ± 0.0	4 c/sec		
SORTER SOIL DENSITY		1.15 tons/m³			
GROUND SOIL DENSITY		1.65 tons/m³			
			CONTAMINATED	CLEAN	
MASS TOTAL			0.79 tons	102.5 tons	
MAXIMUM/SORT			6 kg	53.6 kg	
MINIMUM/SORT			0.7 kg	47.5 kg	
WEIGHT RECOVERY OR VOLUME RECOVER	RY				99.2%
EQUIVALENT SOIL-IN-GROUND			0.63 yd³	81.2 yd <sup>3</sup>	81.9 yd³/day
PARTICLE ACTIVITY (MAXIMUM ESTIMA	ATE)				
TOTAL			15,593 k8q		
MAXIMUM/SORT			1,425 kBq		
MINIMUM/SORT			2.4 kBq		
DISPERSED + PARTICLE (REALISTIC E	ESTIMATE) ACTIVIT	ſΥ	6,409 kBq	1,251 kBq	
MAXIMUM/SORT			1050 kBq	14 kBq	
MINIMUM/SORT			0 Bq	-10 kBq	
SPECIFIC ACTIVITY			8,065 Bq/kg	12 Bq/kg	9
WORK HISTORY					
WORK DAY START	06:00 AM		WORK DAY END	05:30 PM	
PLANT START-UP	06:00 AM		PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:30 AM		END SOIL PROCESSING	05:12 PM	
LUNCH START	12:00 PM		LUNCH PERIOD	0.0 hr	
WORK HOURS			11.5 hr		
AVAILABLE HOURS			11.5 hr		
ACTUAL PROCESS HO	URS (total 20-se	ec records)	10.71 hr		
DOWN-TIME		•	0.79 hr		
TOTAL SYSTEM PAUS	E		0.50 hr		
NONAVAILABLE HOUR	:S		0.0 hr		•
START-UP			0.51 hr		
SHUT-DOWN			0.29 hr		
PLANT PERFORMANCE			93.1%		•
PRODUCTIVITY			93.1%		
TOTAL SOIL PROCESSING RECORDS (2-	SEC and 20-SEC)		2,706		
NONPROCESS RECORDS (Test, calibra	tion, etc)		8		
20-SEC PROCESS RECORDS			1,927		
TOTAL SORT			0=DMM & 0 <dm 0<="" td=""><td></td><td></td></dm>		
NO SORT			1,344 AD=0 & MD=0 &	MND>0	
SOME SORT			583 AD>0&0 <md<mnd< td=""><td>xemQNM&gt;QNM3xem</td><td></td></md<mnd<>	xemQNM>QNM3xem	
UNEXPLAINED RECOR	DS		0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	1			UNEXPLAIN	PAUSE
AD=0 &	MD 0			TIME	TIME
AD<0 &				15:22:32	06:01
ACT_P <5 kBq	235 3	0.2%			13:33

19,270

2-	SEC COL	INT PERIODS				19,210					
		2-SEC RECORD	S WITH SO	RTS	-		(ACT_P	>0 kBq)			
		2-SEC RECORD	S WITH PO	SITIVES	IN >1 DE	TECTOR					
			DETECTOR		180		81.1%				
			DETECTOR		35		15.8%				
			DETECTOR		7		3.2%				
		5	DETECTOR	es .	0		0.0%				
			DETECTOR		0		0.0%				
		7	DETECTOR	RS.	0		0.0%				
		8	DETECTOR	es	0		0.0%				
		T	OTAL			222					
		NET 2-SEC RE	CORDS WIT	TH SORTS		557					
		2-SEC PERIOD				18,713					
		AVG TIME BET				69.2	sec				
		70/	ACT NO	MINDED	SPEC_A	•		ACT_P	SORT	FREQ%	ACT_P
1-GATE S		394	ACT_ND		(Bq/kg)			_ (Bq)	(#)		(kBq)
DETECTR	SORTS	FREQ%	(Bq)	(#)	(bd) kg/			•			
		4.09	-14000	0	-261			4000	103	13.2%	4
1	4	1.0%	-12000	0	-224			8000	328	42.1%	8
2	16		-12000	2	-187			12000	111	14.2%	12
3	49		-8000	3	-149			16000	64	8.2%	16
4	71	18.0%	-6000	22	-112			20000	40	5.1%	20
5	94	23.9%	-6000 -4000	98	-75			24000	22	2.8%	24
6	73		-2000	299	-37			28000	8	1.0%	28
7	65		-2000 Ò	417				32000	12	1.5%	32
8	22		2000	490	37			36000	17	2.2%	36
TOTAL	394		4000	332	75			40000	7	0.9%	40
	0070	385	6000	164	112			44000	11	1.4%	44
2-GATE S			8000	65	149			48000	1	0.1%	48
DETECTR	SORTS	FREGA	10000	24	187			52000	5	0.6%	52
8	•	2.1%	12000	14	224			56000	5	0.6%	56
9	8 29		14000	5	261			60000	5	0.6%	60
10	_		16000	0				64000	8	1.0%	64
11	68		18000	0				68000	2		68
12	73 0/		20000	0				72000	3	0.4%	72
13	94		22000	0				76000	0	0.0%	76
14	66			0				80000	2	0.3%	80
15	47	12.26	24000	•				84000	0	0.0%	84

485

0

SORTS BY ONE GATE ONLY

SORTS BY TWO GATES

0

1935

REC CODE EXPLANATION

SUMMARY TOTALS

385

TOTAL

1.00 Source check (Soil on belt)

26000

>28000

TOTAL

750

436

2.00 Empty belt

HOT PARTICLE EVENTS

MULTIPARTICLE EVENTS DISTRIBUTED EVENTS

2-SEC COUNT PERIODS

3.00 Test (No process soil)

>84

3.2%

25

779

394

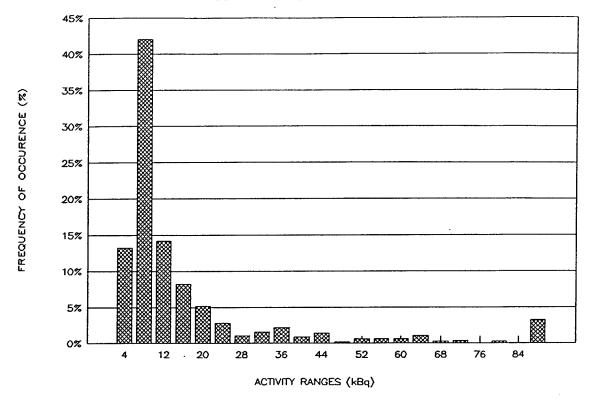
385

>84000

TOTAL

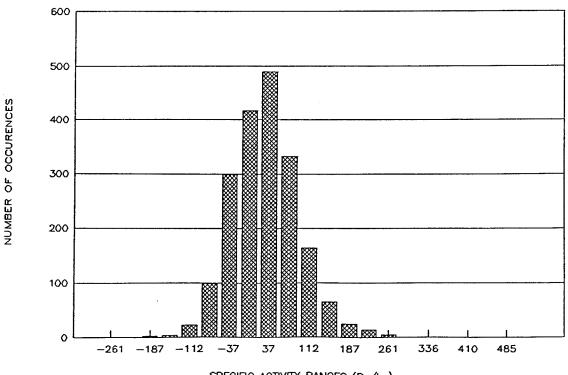
# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 17-Mor-93



### CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 17-Mor-93



SPECIFIC ACTIVITY RANGES (Bq/kg)

SORTER 2 17-Mar-93	_			
AVERAGE BACKGROUND COUNT RATE	0.79 ± 0.	03 c/sec		
SORTER SOIL DENSITY	1.15 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³			
GROOMS SOLE SOLE		CONTAMINATED	CLEAN	
MASS TOTAL		0.92 tons	102.0 tons	
MAXIMUM/SORT		5.4 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	48.2 kg	
				99.1%
WEIGHT RECOVERY OR VOLUME RECOVERY		0.73 yd³	80.9 yd³	81.6 yd3/day
EQUIVALENT SOIL-IN-GROUND		0.75 /4	•	
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	<b>:</b> )			
TOTAL	-	12,448 kBq		
MAXIMUM/SORT		899 kBq		
MINIMUM/SORT		2.8 kBq		
		/ 000 kg-	7,134 kBq	
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTIVITY	6,009 kBq 489 kBq	18 kBq	
MAXIMUM/SORT		•	-8 kBq	
MINIMUM/SORT		0 Bq 6,530 Bq/kg	70 Bq/k	a
SPECIFIC ACTIVITY		6,530 Bd/kg	, v + <del>, v</del> ···	
LOOK HISTORY				
WORK HISTORY WORK DAY START	06:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	06:00 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:30 AM	END SOIL PROCESSING	05:10 PM	
LUNCH START	12:00 PM	LUNCH PERIOD	0.0 hr	
		11.5 hr		
WORK HOURS		11.5 hr		
AVAILABLE HOURS	no (see 1.20 noonds)	10.67 hr		
	RS (total 20-sec records)	0.83 hr		
DOWN-TIME		0.49 hr		
TOTAL SYSTEM PAUSE		0.0 hr		
NONAVAILABLE HOURS		0.51 hr		
START-UP		0.32 hr		
SHUT-DOWN		92.8%		
PLANT PERFORMANCE		92.8%		
PRODUCTIVITY				
TOTAL SOIL PROCESSING RECORDS (2-S	EC and 20-SEC)	2,588		
NONPROCESS RECORDS (Test, calibrat	ion, etc)	6		
20-SEC PROCESS RECORDS		1,921		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		1,178 AD=0 & MD=0 743 AD>0&0 <md<mn< td=""><td>๛ กละหรืดพบ-&lt;พพบกละ กละหรืดพบ-&lt;พพบกละ</td><td>(</td></md<mn<>	๛ กละหรืดพบ-<พพบกละ กละหรืดพบ-<พพบกละ	(
SOME SORT			CHIZAGI INC VINCING	-
UNEXPLAINED RECORD		0	UNEXPLAIN	PAUSE
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		TIME	TIME
AD=0 &			None	06:01
AD<0 &				
ACT_P <5 kBq	167 25.0%			

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19,210

۷.	-2EC CO	ONI PERIODS				17,210					
		2-SEC RECOR	S WITH S	SORTS	•	667	(ACT_P	>0 kBq)			
		2-SEC RECOR	DS WITH F	POSITIVES	IN >1 D	ETECTOR					
		;	2 DETECTO	ORS	158		84.0%				
			3 DETECTO	ORS	25		13.3%				
		4	4 DETECTO	ORS .	4		2.1%				
		!	DETECTO	ORS	1		0.5%				
		(	S DETECTO	RS	0		0.0%				
		;	7 DETECTO	ORS	0		0.0%				
		1	B DETECTO	RS	0		0.0%				
		1	TOTAL			188					
		NET 2-SEC RE	CORDS WI	TH SORTS		479					
		2-SEC PERIO	S WITH N	IO SORTS		18,731					
		AVG TIME BET	WEEN 2-S	EC SORTS		80.2	sec				
1-GATE SO	ORTS	354	ACT_ND	NUMBER	SPEC A		,	CT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)
1	14	4.0%	-14000	0	-261			4000	74	11.1%	4
2	53		-12000	1	-224			8000	267		8
3	62		-10000	1	-187			2000	94	14.1%	12
4	76		-8000	1	-149			6000	50	7.5%	16
5	79		-6000	5	-112			0000	36	5.4%	20
6	45		-4000	15	-75			4000	31	4.6%	24
7	20		-2000	68	-37			8000	21	3.1%	28
8	5	1.4%	0	160	0		3	2000	13	1.9%	32
TOTAL	354		2000	347	37		3	6000	11	1.6%	36
			4000	462	75		4	0000	8	1.2%	40
2-GATE SC	ORTS	313	6000	435	112		4	4000	13	1.9%	44
DETECTR	SORTS	FREQ%	8000	237	149		4	8000	3	0.4%	48
8			10000	127	187		5	2000	5	0.7%	52
9	32	10.2%	12000	35	224		5	6000	11	1.6%	56
10	43	13.7%	14000	21	261		6	0000	6	0.9%	60
11	59	18.8%	16000	10	299		6	4000	3	0.4%	64
12	73	23.3%	18000	1	336		6	8000	3	0.4%	68
13	62	19.8%	20000	1	373		7	2000	1	0.1%	72
14	33	10.5%	22000	0	410		7	6000	2	0.3%	76
15	11	3.5%	24000	0	448		8	0000	1	0.1%	80
TOTAL	313		26000	0	485		8	4000	0	0.0%	84
			>28000	0	0		>8	4000	14	2.1%	>84
			TOTAL	1927			Ţ	OTAL	667		
SUMMARY T	OTALS										
НО	T PARTI	CLE EVENTS	657		SORTS BY	ONE GA	TE ONLY		354		
MU	LTIPART	ICLE EVENTS	710		SORTS BY	TWO GA	TES		313		
			_								

### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

0

2.00 Empty belt

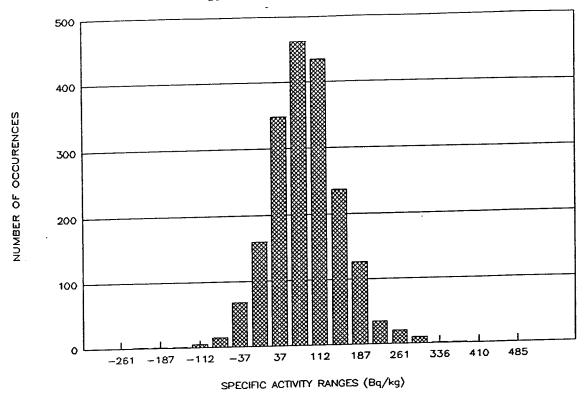
DISTRIBUTED EVENTS

2-SEC COUNT PERIODS

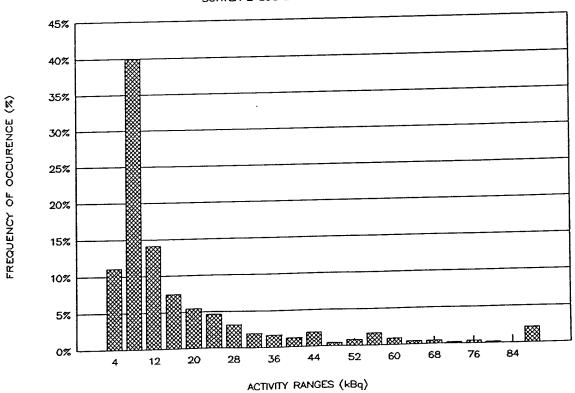
3.00 Test (No process soil)

# CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 17-Mar-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 17-Mar-93



SORTER 1 16-Mar-93					
AVERAGE BACKGROUND COUNT RATE		0.72 ±	0.05 c/sec		
SORTER SOIL DENSITY		1.15 tons/m³	•		
		1.65 tons/m³			
GROUND SOIL DENSITY		1.05 (01.57)	CONTAMINATED	CLEAN	
			0.57 tons	104.0 tons	e
MASS TOTAL			56.2 kg	53.6 kg	•
MAXIMUM/SORT			0.7 kg	47.5 kg	
MINIMUM/SORT			<b>0.7</b> kg	47.53 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY					99.5% —
EQUIVALENT SOIL-IN-GROUND			0.45 yd <sup>3</sup>	82.5 yd³	82.9 yd3/day
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	E)				
TOTAL			9,557 kBq		
MAXIMUM/SORT			1,647 kBq		
MINIMUM/SORT			2.1 kBq		
MINIMO JONI			•		•
DISPERSED + PARTICLE (REALISTIC ES	TIMATE) ACTI	VITY	3,872 kBq	(1,192)kBq	
MAXIMUM/SORT			1390 kBq	17 kBq	
MINIMUM/SORT			0 Bq	-10 kBq	
SPECIFIC ACTIVITY			6,774 Bq/kg	(11)8q/i	(g
WORK HISTORY				05 70 04	
WORK DAY START	06:00 AM		WORK DAY END	05:30 PH	
PLANT START-UP	06:00 AM		PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:17 AM		END SOIL PROCESSING		
LUNCH START	12:00 PM		LUNCH PERIOD	0.0 hr	
WORK HOURS			11.5 hr		
AVAILABLE HOURS			11.5 hr		
ACTUAL PROCESS HOU	RS (total 20	-sec records)	10.84 hr		
DOWN-TIME			0.66 hr		
TOTAL SYSTEM PAUSE			0.72 hr		
NONAVAILABLE HOURS			0.0 hr		
START-UP			0.29 hr		
SHUT-DOWN			0.23 hr		
PLANT PERFORMANCE			94.3%		
PRODUCTIVITY			94.3%		
TOTAL SOIL PROCESSING RECORDS (2-S	EC and 20-5E	^\	2,414		
NONPROCESS RECORDS (Test, calibrat		<i>.</i> ,	12		
20-SEC PROCESS RECORDS	ion, etc)		1,952		
TOTAL SORT			2 MD>0 & MND=0		
NO SORT			1,589 AD=0 & MD=0 &	L MND>0	
			360 AD>0&0 <md<mni< td=""><td></td><td>(</td></md<mni<>		(
SOME SORT	c		1		
UNEXPLAINED RECORD	ა 2		•	UNEXPLAIN	PAUSE
0 <ad<1kbq &="" md="">0</ad<1kbq>				TIME	TIME
AD=0 & 1				08:26:08	05:42
AD<0 &		7/. / <del>.</del> 9		12:31:28	08:17
ACT_P <5 kBq	159	34.4%			··

_	-SEC COUNT	ר טבטוטטג				19,520				1	3:14:36	13:06
2		-SEC RECORDS	ร เมาาม รถ	nrts	-		(ACT_P	>0 kBq)		1	3:28:31	13:11
	2.	-SEC RECORD	S WITH DO	nettives	IN >1 DE		_			1	5:10:11	
	2-		DETECTO		96		85.0%					
			DETECTOR		14		12.4%					
					2		1.8%					
			DETECTO		1		0.9%					
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
			DETECTO	(3	·	113						
			OTAL	ru contc		349						
		ET 2-SEC RE				19,171						
		-SEC PERIOD				111.9						
	Α'	VG TIME BET	WEEN 2-SI	EC SORTS		111.7	360			_		
1-GATE S	ORTS	238	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P	
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)	
DETECTA	555		•									
1	3	1.3%	-14000	1	-261			4000		16.7%	4	
2	13	5.5%	-12000	2	-224			8000	188		8	
3	30	12.6%	-10000	3	-187			12000		14.5%	12	
4	54	22.7%	-8000	10	-149			16000	33		16	
5	59	24.8%	-6000	57	-112			20000	11		20	
6	41	17.2%	-4000	201	-75			24000	26		24	
7	28	11.8%	-2000	399	-37			28000	14		28	
8	10	4.2%	0	527	0			32000	5		32	
TOTAL	238		2000	414	37			36000	4	0.9%	36	
			4000	203	75			40000	6		40	
2-GATE S	ORTS	224	6000	80	112			44000	1		44	
DETECTR	SORTS	FREQ%	8000	28	149			48000	4	0.9%	48 52	
8			10000	18	187			52000	2		52 54	
9	9	4.0%	12000	15	224			56000	5		56 60	
10	10	4.5%	14000	3	261			60000	5		64	
11	42	18.8%	16000	3	299			64000	2		68	
12	53	23.7%	18000	1	336			68000	1			
13	51	22.8%	20000	0	373			72000	0		72 76	
14	39	17.4%	22000	0	410			76000	1			
15	20	8.9%	24000	0	448			80000	2		80	
TOTAL	224		26000	0	485			84000	0		84 >8/	
			>28000	0	0			84000	8		>84	
			TOTAL	1965				TOTAL	462			
SUMMARY	TOTALS								270			
H	OT PARTIC	LE EVENTS	444		SORTS BY			.Υ	238			
H	ULTIPARTI	CLE EVENTS	243		SORTS BY	TWO G	ATES		224			
D	ISTRIBUTE	D EVENTS	166									

### REC CODE EXPLANATION

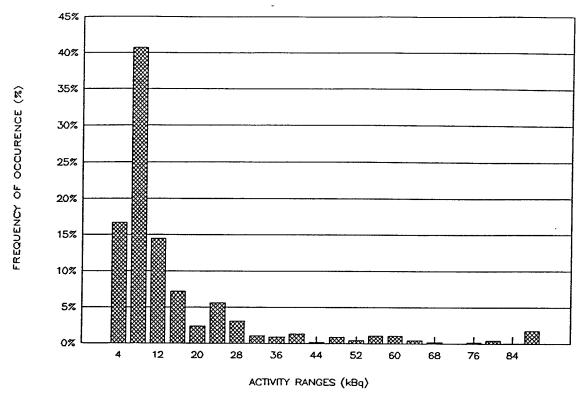
1.00 Source check (Soil on belt)

2.00 Empty belt

3.00 Test (No process soil)

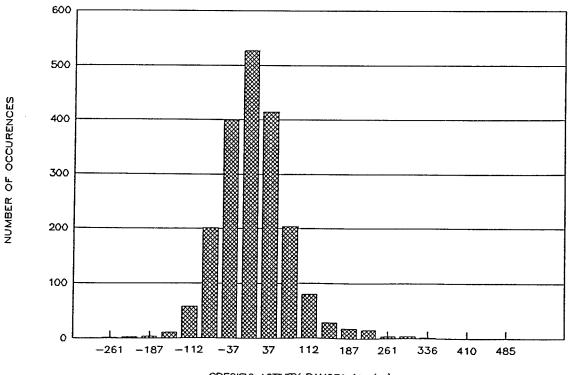
### JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 16-Mar-93



# CLEAN SOIL SPECIFIC ACTIVITY

SORTER 1 LOG DATA FOR 16-Mor-93



SPECIFIC ACTIVITY RANGES (Bq/kg)

SORTER 2 16-Mar-93				
AVERAGE BACKGROUND COUNT RATE	0.79 ± 0.0	3 c/sec		
SORTER SOIL DENSITY	1.15 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m <sup>3</sup>			
GROOND SOIL DENSITY		CONTAMINATED	CLEAN	
MASS TOTAL		0.93 tons	101.4 tons	
MAXIMUM/SORT		56.2 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	48.2 kg	
MINIMON SOA				00.49
WEIGHT RECOVERY OR VOLUME RECOVERY			00.1	99.1% ~~
EQUIVALENT SOIL-IN-GROUND		0.73 yd <sup>3</sup>	80.4 yd <sup>3</sup>	81.1 yd3/day
EUDIVALERI SOLE III EIIO				
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	)			
TOTAL		6,829 kBq		
MAXIMUM/SORT		545 kBq		
MINIMUM/SORT		2.7 kBq		
Hananony - Sec.			5 174 boa	
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTIVITY	3,616 kBq	5,176 kBq	
MAXIMUM/SORT		434 kBq	18 kBq	
MINIMUM/SORT		-2685 Bq	-7 kBq	
SPECIFIC ACTIVITY		3,903 Bq/kg	51 Bq/kg	
Si cori i o novo vo v				
WORK HISTORY			05:30 PM	
WORK DAY START	06:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	06:00 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:17 AM	THE SOLE LINGSTON	0.0 hr	
LUNCH START	12:00 PM	LUNCH PERIOD	0.0 111	
		11.5 hr		
WORK HOURS		11.5 hr		
AVAILABLE HOURS		10.61 hr		
ACTUAL PROCESS HOUR	RS (total 20-sec records)	0.89 hr		
DOWN-TIME		1.00 hr		
TOTAL SYSTEM PAUSE		0.0 hr		
NONAVAILABLE HOURS		0.29 hr		
START-UP		0.21 hr		
SHUT-DOWN		. 92.3%		
PLANT PERFORMANCE		92.3%		
PRODUCTIVITY		72.3%		
		2,269		
TOTAL SOIL PROCESSING RECORDS (2-SI	EC and 20-SEC)	5		
NONPROCESS RECORDS (Test, calibrat	ion, etc)	1,910		
20-SEC PROCESS RECORDS		5 MD>0 & MND=0		
TOTAL SORT		1,299 AD=0 & MD=0	& MND>0	
NO SORT		606 AD>0&0 <md<mn< td=""><td>NamONM&gt; CHM&amp;xamC</td><td></td></md<mn<>	NamONM> CHM&xamC	
SOME SORT	•	0		
UNEXPLAINED RECORDS		-	UNEXPLAIN	PAUSE
0 <ad<1kbq &="" md="">0</ad<1kbq>	1 MD 2		TIME	TIME
AD=0 & 1	· <del></del>		07:11:08	05:42
AD<0 & 1	103 28.7%		13:11:02	13:00
ACT_P <5 kBq	103 20.17			

Printed on 03/21/93 at 06:05:36 PM

19,100

13:28:29

13:11

	2-SEC CC	OUNT PERIODS				19,100				13:28:29	13:11
		2-SEC RECOR	S WITH S	ORTS	-	359	(ACT_P >0	kBq)		13:28:31	13:15
		2-SEC RECOR	OS WITH P	OSITIVES	IN >1 D	ETECTOR					13:19
		7	2 DETECTO	RS	90		85.7%				
			3 DETECTO	RS	12		11.4%				
		4	DETECTO	RS	3		2.9%				
		9	DETECTO	RS	0		0.0%				
		(	DETECTO	RS	0		0.0%				
	7 DETECTORS						0.0%				
	8 DETECTORS						0.0%				
TOTAL						105					
	NET 2-SEC RECORDS WITH SORTS					254					
	2-SEC PERIODS WITH NO SORTS					18,846					
		AVG TIME BET	WEEN 2-S	EC SORTS		150.4	sec				
1-GAT	E SORTS	190	ACT_ND	NUMBER	SPEC_A		ACT	P SORT	FREQ%	ACT_P	
DETEC			(Bq)		(Bq/kg)		(B	<del>-</del>		(kBq)	
			V- 10				_			•	
	1 8	4.2%	-14000	0	-261		40	00 44	12.3%	4	
	2 36	18.9%	-12000	0	-224		80	00 147	40.9%	8	
	3 39	20.5%	-10000	2	-187		120	00 55	15.3%	12	
	4 44	23.2%	-8000	1	-149		1600	00 29	8.1%	16	
	5 32	16.8%	-6000	6	-112		2000	00 10	2.8%	20	
	6 23		-4000	18	-75		2400	00 12	3.3%	24	
	7 7	3.7%	-2000	90	-37		2800	0 10	2.8%	28	
:	8 1	0.5%	0	277	0		3200	0 10	2.8%	32	
TOTA	L 190		2000	428	37		3600	0 7	1.9%	36	
			4000	476	75		4000	00 4	1.1%	40	
2-GATE SORTS 169		169	6000	343	112		4400	0 1	0.3%	44	
DETEC	TR SORTS	FREQ%	8000	176	149		4800	0 5	1.4%	48	
1	В		10000	49	187		5200	0 3	0.8%	52	
•	9 21	12.4%	12000	22	224		5600	0 1	0.3%	56	
10	28	16.6%	14000	18	261		6000	0 4	1.1%	60	
1	39	23.1%	16000	7	299		6400	0 5	1.4%	64	
12	2 33	19.5%	18000	2	336		6800	0 1	0.3%	68	
13	30	17.8%	20000	0	373		7200	0 0	0.0%	72	
14	15	8.9%	22000	0	410		7600	0 0	0.0%	76	
15	3	1.8%	24000	0	448		8000	0 0	0.0%	80	
TOTAL	. 169		26000	0	485		8400	0 0	0.0%	84	
			>28000	0	0		>8400	0 11	3.1%	>84	
			TOTAL	1915			ATOT	L 359			
SUMMAR	Y TOTALS										
HOT PARTICLE EVENTS 358			358		SORTS BY	ONE GA	TE ONLY	190			
MULTIPARTICLE EVENTS			602		SORTS BY	TWO GA	TES	169			
DISTRIBUTED EVENTS			411								

### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

2.00 Empty belt

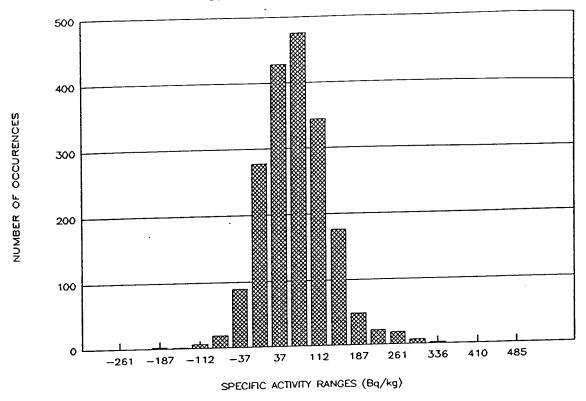
2-SEC COUNT PERIODS

3.00 Test (No process soil)

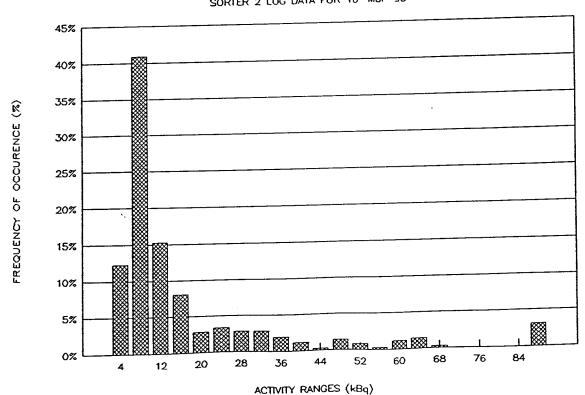
2

# CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 16-Mor-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 16-MOT-93



A-316

SORTER 1 15-Mar-93	-							
AVEDAGE BACKCOOKIND COUNT BATE	0.74 ± 0.	.05 c/sec						
AVERAGE BACKGROUND COUNT RATE	1.15 tons/m³	.05 6,566						
SORTER SOIL DENSITY	1.65 tons/m <sup>3</sup>							
GROUND SOIL DENSITY	r.os cons/iii	CONTAMINATED	CLEAN					
MACO TOTAL		0.53 tons	95.6 tons					
MASS TOTAL		56.2 kg	53.6 kg					
MAXIMUM/SORT		0.7 kg	49.5 kg					
MINIMUM/SORT		0.1 kg	47.5 kg					
WEIGHT RECOVERY OR VOLUME RECOVERY				99.5%				
EQUIVALENT SOIL-IN-GROUND		0.42 yd³	75.8 yd³	76.2 yd <sup>3</sup> /day				
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	)							
TOTAL	•	6,475 kBq						
MAXIMUM/SORT		221 kBq						
MINIMUM/SORT		2.4 kBq						
maniony solution								
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTIVITY	2,773 kBq	(1,405)kBq					
MAXIMUM/SORT		163 kBq	12 kBq					
MINIMUM/SORT		0 Bq	-11 kBq					
SPECIFIC ACTIVITY		5,263 Bq/kg	(15)Bq/kg	)				
<b>5. 253. 15</b> 1.5		, , ,						
WORK HISTORY								
WORK DAY START	06:00 AM	WORK DAY END	05:30 PM					
PLANT START-UP	06:00 AM	PLANT SHUT-DOWN	05:30 PM					
START SOIL PROCESSING	06:34 AM	END SOIL PROCESSING	04:59 PM					
LUNCH START	12:00 PM	LUNCH PERIOD	0.0 hr					
WORK HOURS		11.5 hr	ميصنه	·•-;				
AVAILABLE HOURS		11.5 hr						
ACTUAL PROCESS HOUR	S (total 20-sec records)	9.96 hr						
DOWN-TIME		1.54 hr						
TOTAL SYSTEM PAUSE		1.09 hr						
NONAVAILABLE HOURS		0.0 hr						
START-UP		0.58 hr						
SHUT-DOWN		0.50 hr						
PLANT PERFORMANCE		86.6%						
PRODUCTIVITY		86.6%						
TOTAL SOIL PROCESSING RECORDS (2-SE	C and 20-SEC)	2,191						
NONPROCESS RECORDS (Test, calibration		26						
20-SEC PROCESS RECORDS		1,793						
TOTAL SORT		2 MD>0 & MND=0						
NO SORT		1,442 AD=0 & MD=0 & MND>0						
SOME SORT		349 AD>0&0 <md<mnd< td=""><td>max&amp;MND<mndmax< td=""><td></td></mndmax<></td></md<mnd<>	max&MND <mndmax< td=""><td></td></mndmax<>					
UNEXPLAINED RECORDS		0						
0 <ad<1kbq &="" md="">0</ad<1kbq>	1		UNEXPLAIN	PAUSE				
AD=0 & MI	) 2		TIME	TIME				
AD < O > MA	0		08:41:56	05:51				
ACT_P <5 kBq	122 30.7%		13:32:56	06:51				

15:20:34

08:28

2-SEC COUNT PERIODS					17,930				15	08:28	
2-SEC COUNT PERIODS  2-SEC RECORDS WITH SORTS					-		(ACT_P >0 kBq	1			15:11
2-SEC RECORDS WITH SORTS 2-SEC RECORDS WITH POSITIVES					IN >1 DE	<b>TECTOR</b>		•			15:15
2 DETECTORS					90		81.1%				15:35
			DETECTOR		15		13.5%				
					4		3.6%				
4 DETECTORS					1		0.9%				
5 DETECTORS					0		0.0%				
6 DETECTORS					0	•	0.0%				
7 DETECTORS					0		0.0%				
8 DETECTORS					•	111					
TOTAL						287					
NET 2-SEC RECORDS WITH SO						17,643					
2-SEC PERIODS WITH NO SORTS						124.9	coc				
		VG TIME BET	WEEN 2-SI	EC SORTS		124.9	sec				
							ACT D	SORT	FREQ%	ACT_P	
1-GATE	SORTS	205	ACT_ND		SPEC_A		ACT_P	(#)		(kBq)	
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(Bq)	(#)		(	
					2/1		4000	61	15.3%	4	
1	3	****	-14000	4	-261		8000	163	41.0%	8	
2	15	7.3%	-12000	3	-224		12000	52	13.1%	12	
3	25	12.2%	-10000	9	-187		16000	21	5.3%	16	
4	47	22.9%	-8000	10	-149		20000	16	4.0%	20	
5	42	20.5%	-6000	76	-112		24000	18		24	
6	34	16.6%	-4000	207	-75		28000	7		28	
7	32	15.6%	-2000	380	-37		32000	8	2.0%	32	
8	7	3.4%	0	478	0		36000	5	1.3%	36	
TOTAL	205		2000	323	37		40000	8		40	
			4000	179	75		44000	1	0.3%	44	
2-GATE	SORTS	193	6000	84	112		48000	6		48	
DETECTR	SORTS	FREQ%	8000	33	149		52000	7		52	
8			10000	24	187		56000	4		56	
9.	. 7	3.6%	12000	8	224		60000	5		60	
10	18	9.3%	14000	1	261			1		64	
11	37	19.2%	16000	0	299		64000	3		68	
12	45	23.3%	18000	0	336		68000	0		72	
13	35	18.1%	20000	0	373		72000	0		76	
14	29	15.0%	22000	0	410		76000				
15	22	11.4%	24000	0	448		80000	0		84	
TOTAL	193		26000	0	485		84000	10		>84	
			>28000	0	0		>84000	10		<b>&gt;04</b>	
			TOTAL	1819			TOTAL	398			
SUMMARY	TOTALS							205			
HOT PARTICLE EVENTS 3			384		SORTS BY						
MULTIPARTICLE EVENTS			232		SORTS BY	TWO G	ATES	193			
	DISTRIBUT	ED EVENTS	166								

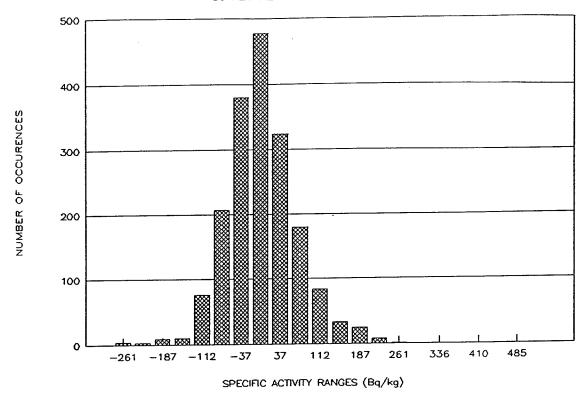
### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

2.00 Empty belt

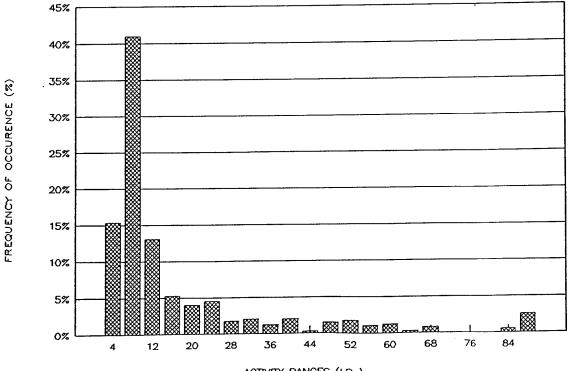
3.00 Test (No process soil)

SORTER 1 LOG DATA FOR 15-Mar-93



# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 15-Mor-93



ACTIVITY RANGES (kBq)

A-319

SORTER 2 15-Mar-93				
THE DACKSON WE COUNT DATE	0.79 ±	0.03 c/sec		
AVERAGE BACKGROUND COUNT RATE	1.15 tons			
SORTER SOIL DENSITY	1.65 tons	-		
GROUND SOIL DENSITY	1105 (61)	CONTAMINATED	CLEAN	
WAS TOTAL		0.74 tons	89.6 tons	3
MASS TOTAL		56.2 kg	53.6 kg	
MAXIMUM/SORT		0.7 kg	48.2 kg	
MINIMUM/SORT			-	******
WEIGHT RECOVERY OR VOLUME RECOVERY				99.2%
EQUIVALENT SOIL-IN-GROUND		0.58 yd³	71.0 yd³	71.6 yd3/day
EGGLAVENI 2015-14-940040		·		
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	:)			
TOTAL	••	5,793 kBq		
MAXIMUM/SORT	•	144 kBq	•	
MINIMUM/SORT		2.7 kBq		
WINIMON/ 20K1		•		
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTIVITY	3,139 kBq	4,048 kBq	
		122 kBq	14 kBq	
MAXIMUM/SORT		0 Bq	-13 kBq	
MINIMUM/SORT		4,257 Bq/kg	45 Bq/k	g
SPECIFIC ACTIVITY		,		
WORK HISTORY				
WORK DAY START	06:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	06:00 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	07:25 AM	END SOIL PROCESSING	04:59 PM	
LUNCH START	12:00 PM	LUNCH PERIOD	0.0 hr	
LUNCH START	12.00 1			
WORK HOURS		11.5 hr		
AVAILABLE HOURS		11.5 hr		
******	S (total 20-sec record	s) 9.37 hr		
DOWN-TIME		2.13 hr		
TOTAL SYSTEM PAUSE		1.79 hr		
NONAVAILABLE HOURS		0.0 hr		
START-UP		1.42 hr		
SHUT-DOWN		0.51 hr		
PLANT PERFORMANCE		81.4%	•	
PRODUCTIVITY		81.4%		
TOTAL SOIL PROCESSING RECORDS (2-SE	C and 20-SEC)	2,088		
NONPROCESS RECORDS (Test, calibrati		5、		
20-SEC PROCESS RECORDS	·	1,686		
TOTAL SORT		2 MD>0 & MND=0		
NO SORT		1,137 AD=0 & MD=0 &		
SOME SORT		546 AD>0&0 <md<mn[< td=""><td>)max&amp;MND<mndmax< td=""><td></td></mndmax<></td></md<mn[<>	)max&MND <mndmax< td=""><td></td></mndmax<>	
UNEXPLAINED RECORDS		1		
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		UNEXPLAIN	PAUSE
AD=0 & M	D 2		TIME	TIME
AD<0 & M	_		08:41:57	05:51
ACT_P <5 kBq	103 25.6%		13:27:37	08:28
<del>-</del>				

16,860

2	-SEC COL	JN1 PEKTOD2				10,000				
		2-SEC RECORD	S WITH S	ORTS	-	402 (A	CT_P >0 kBq	<b>(</b> i		
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE					
		2	DETECTO	RS	92	83	.6%			
		3	DETECTO	RS	15		-6%			
		4	DETECTO	RS	3		.7%			
		5	DETECTO	RS	0		.0%			
		6	DETECTO	RS	0		.0%			
		7	DETECTO	RS	0	0	.0%			
		8	DETECTO	RS	0	0.	.0%			
		Т	OTAL			110				
		NET 2-SEC RE	CORDS WI	TH SORTS		292				
		2-SEC PERIOD	S WITH N	O SORTS		16,568				
		AVG TIME BET	WEEN 2-S	EC SORTS		115.5 sec	c			
1-GATE S	ORTS	211	ACT_ND	NUMBER	SPEC_A		ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(Bq)	(#)		(k8q)
1	6	2.8%	-14000	0			4000	49	12.2%	4
2	30	14.2%	-12000	2			8000	167		8
3	57	27.0%	-10000	0			12000	55		12
4	52	24.6%	-8000	2			16000	33	8.2%	16
5	34	16.1%	-6000	15	-112		20000	16		20
6	16	7.6%	-4000	37			24000	18		24
7	12	5.7%	-2000	115	-37		28000	14	3.5%	28
8	4	1.9%	0	226	0		32000	11	2.7%	32
TOTAL	211		2000	349	37		36000	9		36
			4000	403	75		40000	3		40
2-GATE S	ORTS	191	6000	309	112		44000	2		44
DETECTR	SORTS	FREQ%	8000	160	149		48000	3	0.7%	48
8			10000	52	187		52000	1		52
9	15	7.9%	12000	18	224		56000	4	1.0%	56
10	40	20.9%	14000	3	261		60000	6	1.5%	60
11	54	28.3%	16000	0	299		64000	1		64
12	37	19.4%	18000	0	336		68000	2	0.5%	68
13	23	12.0%	20000	0	373		72000	1	0.2%	72
14	12	6.3%	22000	0	410		76000	0	0.0%	76
15	10	5.2%	24000	0	448		80000	0		80
TOTAL	191		26000	0	485		84000	0	0.0%	84
			>28000	0	0		>84000	7	1.7%	>84
			TOTAL	1691			TOTAL	402		
SUMMARY 1	TOTALS									
		CLE EVENTS	392			ONE GATE		211		
M	ULTIPARI	TICLE EVENTS	536		SORTS BY	TWO GATES	5	191		

#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

166

2.00 Empty belt

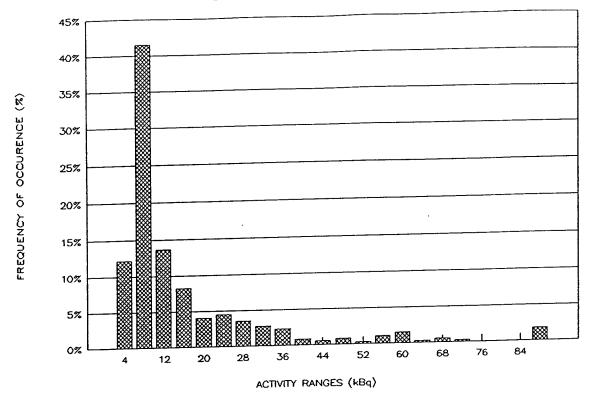
DISTRIBUTED EVENTS

2-SEC COUNT PERIODS

3.00 Test (No process soil)

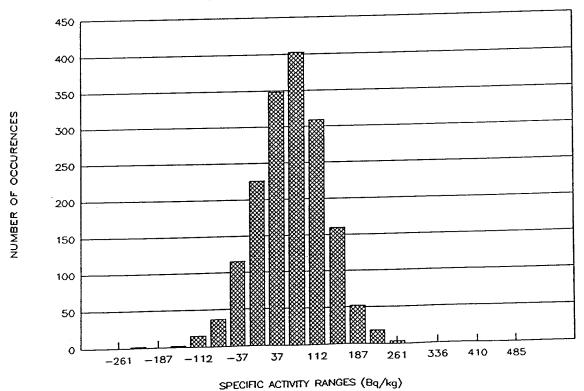
# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 15-Mor-93



# CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 15-Mar-93



SORTER 1 20-Feb-93				
COUNT DATE	0.70 ± 0	.02 c/sec		
AVERAGE BACKGROUND COUNT RATE	1.15 tons/m³			
SORTER SOIL DENSITY	1.65 tons/m³			
GROUND SOIL DENSITY	1.05 (0.13/11)	CONTAMINATED	CLEAN	
70741		0.31 tons	95.8 ton:	S
MASS TOTAL		4.7 kg	53.6 kg	
MAXIMUM/SORT		0.7 kg	48.9 kg	
MINIMUM/SORT		-		
WEIGHT RECOVERY OR VOLUME RECOVER	Υ			99.7% ~~
EQUIVALENT SOIL-IN-GROUND		0.25 yd <sup>3</sup>	75.9 yd³	76.2 yd3/day
ENDIVIDENT BOTE TO SHEET				
PARTICLE ACTIVITY (MAXIMUM ESTIMA	TE)			
TOTAL		6,070 kBq		
MAXIMUM/SORT		655 kBq		
MINIMUM/SORT		2.6 kBq		
DISPERSED + PARTICLE (REALISTIC E	STIMATE) ACTIVITY	2,445 kBq	(789)kBq	
MAXIMUM/SORT		398 kBq	12 kBq	
MINIMUM/SORT		0 Bq	-10 kBq	
SPECIFIC ACTIVITY		7,911 Bq/kg	(8)Bq/l	(g
WORK HISTORY			70	
WORK DAY START	04:45 AM	WORK DAY END	03:30 PM	
PLANT START-UP	04:45 AM	PLANT SHUT-DOWN	03:30 PM	
START SOIL PROCESSING	05:16 AM	END SOIL PROCESSING		
LUNCH START	11:30 AM	LUNCH PERIOD	0.0 hr	
		10.8 hr		
WORK HOURS		10.8 hr		
AVAILABLE HOURS		9.96 hr		
	URS (total 20-sec records)	0.79 hr		
DOWN-TIME	-	0.50 hr		
TOTAL SYSTEM PAUS		0.0 hr		
NONAVAILABLE HOUR	3	0.53 hr		
START-UP		0.27 hr		
SHUT-DOWN		92.7%		
PLANT PERFORMANCE PRODUCTIVITY		92.7%		
PRODUCTIVITI				
TOTAL SOIL PROCESSING RECORDS (2-	SEC and 20-SEC)	2,083		
NONPROCESS RECORDS (Test, calibra		13		
20-SEC PROCESS RECORDS	ictori, ccc,	1,793		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		1,529 AD=0 & MD=0 8	& MND>0	
SOME SORT		264 AD>0&0 <md<mn< td=""><td>Dmax&amp;MND<mndma< td=""><td>x</td></mndma<></td></md<mn<>	Dmax&MND <mndma< td=""><td>x</td></mndma<>	x
UNEXPLAINED RECOR	DS	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		UNEXPLAIN	PAUSE
AD=0 &			TIME	TIME
AD<0 &			None	04:46
ACT P <5 kBq	70 24.1%			

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2-	SEC COU	NT PERIODS				17,930					
-	520 000	2-SEC RECORDS	S WITH SO	ORTS	-	290	(ACT_P	>0 kBq)			
		2-SEC RECORDS	S WITH PO	OSITIVES	IN >1 DE	TECTOR					
			DETECTOR		78		87.6%				
		3	DETECTOR	RS	8		9.0%				
		4	DETECTOR	RS	3		3.4%				
		5	DETECTOR	RS	0		0.0%				
		6	DETECTOR	RS	0		0.0%				
		7	DETECTOR	RS	0		0.0%				
		8	DETECTOR	RS	0		0.0%				
		T	OTAL			89					
		NET 2-SEC RE	CORDS WIT	TH SORTS		201					
		2-SEC PERIOD				17,729					
		AVG TIME BET				178.4	sec				
1-GATE SO	RTS	148	ACT_ND	NUMBER	SPEC_A			ACT_P		FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)
DETECTA	300		·								
1	3	2.0%	-14000	1	-261			4000	31	10.6%	4
2	9	6.0%	-12000	1	-224			8000	118	40.4%	8
3	13	8.7%	-10000	1	-187			12000	49	16.8%	12
4	29	19.5%	-8000	5	-149			16000	19	6.5%	16
5	38	25.5%	-6000	45	-112			20000	14	4.8%	20
6	22	14.8%	-4000	173	-75			24000	9	3.1%	24
7	26	17.4%	-2000	344	-37			28000	6	2.1%	28
8	9	6.0%	0	486	0			32000	9	3.1%	32
TOTAL	149		2000	405	37			36000	1	0.3%	36
			4000	205	75			40000	5	1.7%	40
2-GATE SO	ORTS	142	6000	85	112			44000	4	1.4%	44
DETECTR	SORTS	FREQ%	8000	30	149			48000	2		48 53
8			10000	14	187			52000	6	2.1%	52 56
9	6	4.2%	12000	9	224			56000	1		60
10	16	11.2%	14000	0	261			60000	2		
11	26	18.2%	16000	0	299			64000	3		64 49
12	26	18.2%	18000	0	336			68000	1		68 73
13	29	20.3%	20000	0	373			72000	0		72 76
14	25	17.5%	22000	0	410			76000	0	0.0%	70 80

SUMMARY TOTALS

14

15

TOTAL

TIUIALS			410
HOT PARTICLE EVENTS	276	SORTS BY ONE GATE ONLY	148
MULTIPARTICLE EVENTS	183	SORTS BY TWO GATES	142
DISTRIBUTED EVENTS	0		

1804

448

485

0

#### REC CODE EXPLANATION

15

143

1.00 Source check (Soil on belt)

24000

26000

>28000

TOTAL

10.5%

- 2.00 Empty belt
- 3.00 Test (No process soil)

80

84

>84

0.0%

0.0%

4.1%

0

12

292

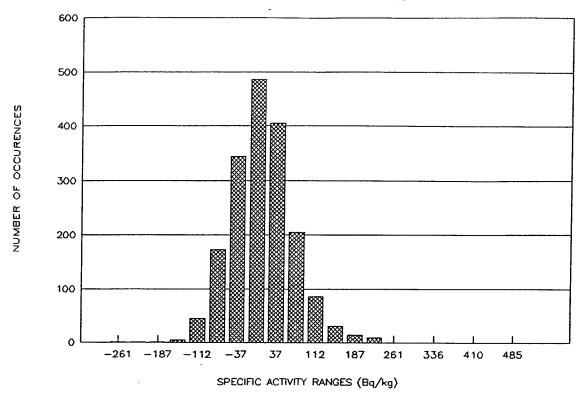
80000

84000

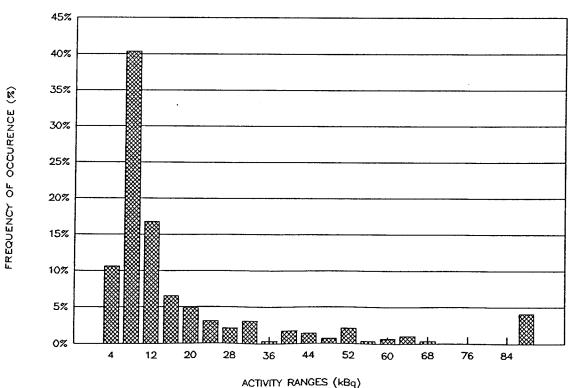
>84000

TOTAL

SORTER 1 LOG DATA FOR 20-Feb-93



#### JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 20-Feb-93



SORTER 2 20-Feb-93					
AVERAGE BACKGROUND COUNT RATE	0.7	9 ± 0.04	4 c/sec		
SORTER SOIL DENSITY		5 tons/m³			
GROUND SOIL DENSITY	1.6	5 tons/m³			
GROUND SOIL DEMSITT			CONTAMINATED	CLEAN	
MAGG TOTAL			0.51 tons	62.9	tons
MASS TOTAL  MAXIMUM/SORT			53.6 kg	53.6	kg
MINIMUM/SORT			0.7 kg	48.9	kg
MINIMONY SOAT					
WEIGHT RECOVERY OR VOLUME RECOVERY					99.2%
EQUIVALENT SOIL-IN-GROUND			0.41 yd <sup>3</sup>	49.9	yd³ 50.3 yd³/day
EGOLANCEM SOLE IN CHOSHS					
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	)				
TOTAL			3,092 kBq		
MAXIMUM/SORT .			231 kBq		
MINIMUM/SORT			3.1 kBq		
HIATRON SOAT					
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTIVITY		1,792 kBq	4,113	kBq
MAXIMUM/SORT			179 kBq	18	k8q
MINIMUM/SORT			0 Bq	-8	kBq
SPECIFIC ACTIVITY			3,499 Bq/kg	65	Bq/kg
SECULIO NOTITE					
WORK HISTORY					
WORK DAY START	04:45 AM		WORK DAY END	03:30 PM	
PLANT START-UP	04:45 AM		PLANT SHUT-DOWN	03:30 PM	
START SOIL PROCESSING	08:39 AM		END SOIL PROCESSING		
LUNCH START	11:30 AM		LUNCH PERIOD	0.0	hr
<b>Contain</b> Oranic					
WORK HOURS			10.8 hr		
AVAILABLE HOURS			10.8 hr		
ACTUAL PROCESS HOUR	S (total 20-sec	records)	6.58 hr		
DOWN-TIME			4.17 hr		
TOTAL SYSTEM PAUSE			3.90 hr		
NONAVAILABLE HOURS			0.0 hr		
START-UP			3.91 hr		
SHUT-DOWN			0.25 hr		
PLANT PERFORMANCE			61.2%		
PRODUCTIVITY			61.2%		
			4 7//		
TOTAL SOIL PROCESSING RECORDS (2-SE			1,364		
NONPROCESS RECORDS (Test, calibrati	on, etc)		9		
20-SEC PROCESS RECORDS			1,184		
TOTAL SORT			3 MD>0 & MND=0	e mio>0	
NO SORT			848 AD=0 & MD=0 8 333 AD>0&0 <md<mni< td=""><td></td><td>Dmax</td></md<mni<>		Dmax
SOME SORT				<b>ハロペクロコログ ノブル</b>	artind/1
UNEXPLAINED RECORDS			0	INICYOLATII	PAUSE
0 <ad<1kbq &="" md="">0</ad<1kbq>	2			UNEXPLAIN	TIME
AD=0 & M				TIME	04:46
AD<0 & M				11:43:31 15:01:11	12:40
ACT_P <5 kBq	51 28.	.3%		13:01:11	14.7.7

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2-SEC COUNT PERIODS	11,84	0
2-SEC RECORDS WITH SORTS	_ 18	0 (ACT_P >0 kBq)
2-SEC RECORDS WITH POSITIVES	IN >1 DETECTO	R
2 DETECTORS	37	84.1%
3 DETECTORS	7	15.9%
4 DETECTORS	0	0.0%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL	4	4
NET 2-SEC RECORDS WITH SORTS	13	6
2-SEC PERIODS WITH NO SORTS	11,70	4
AVG TIME BETWEEN 2-SEC SORTS	174.	1 sec

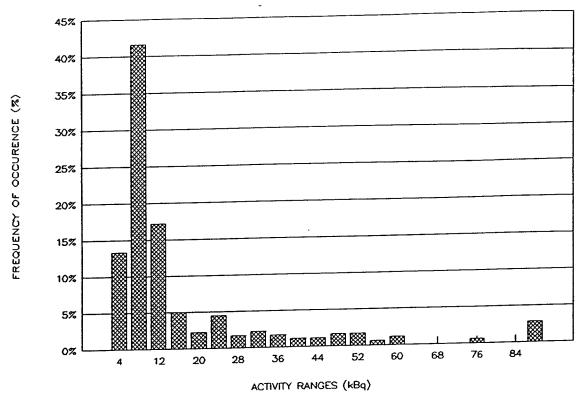
1-GATE S	ORTS	92	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	3	3.3%	-14000	0	-261	4000	24	13.3%	4
2	9	9.8%	-12000	0	-224	8000	75	41.7%	8
3	12	13.0%	-10000	0	-187	12000	31	17.2%	12
4	22	23.9%	-8000	2	-149	16000	9	5.0%	16
5	17	18.5%	-6000	2	-112	20000	4	2.2%	20
6	14	15.2%	-4000	14	-75	24000	8	4.4%	24
7	13	14.1%	-2000	39	-37	28000	3	1.7%	28
8	2	2.2%	0	112	0	32000	4	2.2%	32
TOTAL	92		2000	240	37	36000	3	1.7%	36
			4000	302	75	40000	2	1.1%	40
2-GATE SO	ORTS	88	6000	254	112	44000	. 2	1.1%	44
DETECTR	SORTS	FREQ%	8000	118	149	48000	3	1.7%	48
8			10000	55	187	52000	3	1.7%	52
9	6	6.8%	12000	34	224	56000	1	0.6%	56
10	9	10.2%	14000	10	261	60000	2	1.1%	60
11	18	20.5%	16000	6	299	64000	0	0.0%	64
12	16	18.2%	18000	4	336	68000	0	0.0%	68
13	16	18.2%	20000	1	373	72000	0	0.0%	72
14	15	17.0%	22000	0	410	76000	1	0.6%	76
15	8	9.1%	24000	0	448	80000	0	0.0%	80
TOTAL	<b>88</b>		26000	0	485	84000	0	0.0%	84
			>28000	0	0	>84000	5	2.8%	>84
			TOTAL	1193		TOTAL	180		
SUMMARY 1	TOTALS								
HC	T PARTIC	LE EVENTS	180		SORTS BY	ONE GATE ONLY	92		
ML	JLTIPARTI	CLE EVENTS	343		SORTS BY	TWO GATES	88		
DI	STRIBUTE	D EVENTS	237						

#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

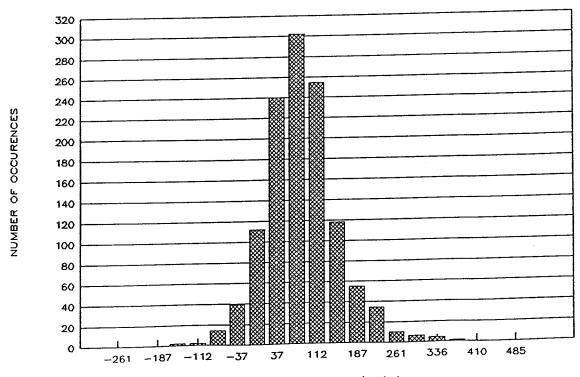
# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 20-Feb-93



# CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 20-Feb-93



SPECIFIC ACTIVITY RANGES (Bq/kg)

SORTER 1 19-Feb-93				
AVERAGE BACKGROUND COUNT RATE	0.70 ±	0.02 c/sec		
SORTER SOIL DENSITY	1.15 tons/m	,5		
GROUND SOIL DENSITY	1.65 tons/m	3		
		CONTAMINATED	CLEAN	
MASS TOTAL		0.21 tons	82.9 ton	s
MAXIMUM/SORT		3.3 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	50.2 kg	
WEIGHT RECOVERY OR VOLUME RECOVER	Υ			99.7% —
EQUIVALENT SOIL-IN-GROUND		0.17 yd <sup>3</sup>	65.7 yd <sup>3</sup>	65.9 yd³/day
PARTICLE ACTIVITY (MAXIMUM ESTIMA	TE)			
TOTAL		2,359 kBq		
MAXIMUM/SORT		162 kBq		•
MINIMUM/SORT		2.3 kBq		
DISPERSED + PARTICLE (REALISTIC E	STIMATE) ACTIVITY	1,119 kBq	(742)kBq	
MAXIMUM/SORT		85 kBq	13 kBq	
MINIMUM/SORT		0 Bq	-10 kBq	
SPECIFIC ACTIVITY		5,363 Bq/kg	(9)Bq/I	(g
WORK HISTORY				
WORK DAY START	07:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	07:00 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	08:20 AM	END SOIL PROCESSING		
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr	
WORK HOURS		10.0 hr		
AVAILABLE HOURS		10.0 hr		
ACTUAL PROCESS HO	JRS (total 20-sec records)	8.62 hr		
DOWN-TIME		1.38 hr		
TOTAL SYSTEM PAUSE		0.69 hr		
NONAVAILABLE HOURS	5	0.0 hr		
START-UP		1.34 hr		
SHUT-DOWN		0.49 hr		
PLANT PERFORMANCE		86.2%		
PRODUCTIVITY		86.2%		
TOTAL SOIL PROCESSING RECORDS (2-S		1,711		
NONPROCESS RECORDS (Test, calibrat	tion, etc)	17		
20-SEC PROCESS RECORDS		1,551		
TOTAL SORT		0 MD>0 & MND=0	100-0	
NO SORT		1,351 AD=0 & MD=0 &		
SOME SORT		200 AD>0&0 <md⊲mnd< td=""><td>max&amp;MND<mndmax< td=""><td></td></mndmax<></td></md⊲mnd<>	max&MND <mndmax< td=""><td></td></mndmax<>	
UNEXPLAINED RECORD		0	IMEVDI ATM	DALICE
0 <ad<1kbq &="" md="">0</ad<1kbq>	1		UNEXPLAIN	PAUSE TIME
AD=0 &			TIME 10:51:47	07:38
AD<0 & ACT_P <5 kBq	MD 0 60 37.5%		10.31:47	01.30

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2-SEC COUNT PERIODS	15,51	0
2-SEC RECORDS WITH SORTS	16	0 (ACT_P >0 kBq)
2-SEC RECORDS WITH POSITIVES	IN >1 DETECTO	PR .
2 DETECTORS	36	83.7%
3 DETECTORS	7	16.3%
4 DETECTORS	0	0.0%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL	4	3
NET 2-SEC RECORDS WITH SORTS	11	7
2-SEC PERIODS WITH NO SORTS	15,39	3
AVG TIME BETWEEN 2-SEC SORTS	265.	1 sec

1-GATE S		82 FREQ%	ACT_ND	NUMBER	SPEC_A (Bq/kg)	ACT_P (Bq)	SORT	FREQ%	ACT <u>·</u> P (kBq)
DETECTR	SORTS	FREUM	(04)	()	( p				
1	. 5	6.1%	-14000	1	-261	4000	25	15.6%	4
2	7	8.5%	-12000	0	-224	8000	68	42.5%	8
3	8	9.8%	-10000	1	-187	12000	23	14.4%	12
4	20	24.4%	-8000	5	-149	16000	7	4.4%	16
5	15	18.3%	-6000	46	-112	20000	7	4.4%	20
6	10	12.2%	-4000	137	-75	24000	3	1.9%	24
7	12	14.6%	-2000	315	-37	28000	8	5.0%	28
8	5	6.1%	0	436	0	32000	3	1.9%	32
TOTAL	82		2000	334	37	36000	2	1.3%	36
TOTAL	00		4000	175	<b>7</b> 5	40000	2	1.3%	40
2-GATE S	OTTO	78	6000	74	112	44000	0	0.0%	44
DETECTR	SORTS	FREQ%	8000	24	149	48000	0	0.0%	48
DE 1 EU 1 K	30113	111227	10000	14	187	52000	2	1.3%	52
9	4	5.1%	12000	5	224	56000	1	0.6%	56
10	5	6.4%	14000	1	261	60000	2	1.3%	60
	14	17.9%	16000	0	299	64000	2	1.3%	64
11 12	23	29.5%	18000	0	336	68000	1	0.6%	68
13	<u>د</u> 8	10.3%	20000	0	373	72000	0	0.0%	72
	12	15.4%	22000	0	410	76000	0	0.0%	76
14		15.4%	24000	0	448	80000	0	0.0%	80
. 15	12	13.4%	26000	0		84000	0	0.0%	84
TOTAL	78		>28000	0		>84000	4	2.5%	>84
			TOTAL	1568		TOTAL	160		
01 #### DV	TOTALC		TOTAL	,,,,,					
SUMMARY	TOTALS OT PARTICL	E EVENTS	170		SORTS BY	ONE GATE ONLY	82		
		CLE EVENTS	139			TWO GATES	78		
	ISTRIBUTED		0						
υ	TOLKIDOLET	CATHIO	•						

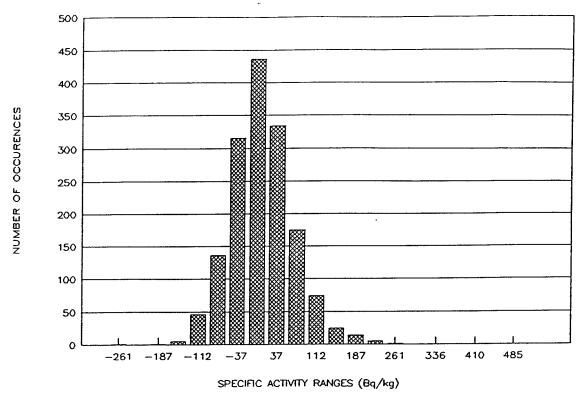
#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

2.00 Empty belt

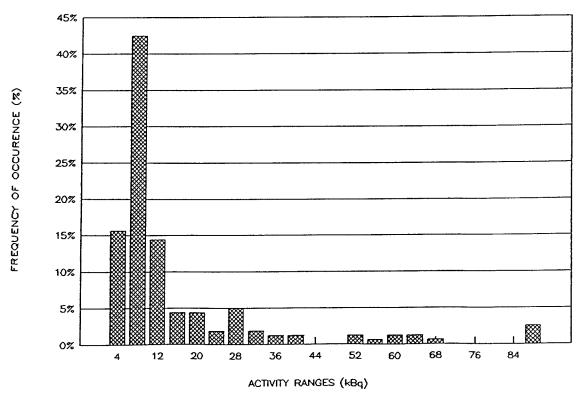
3.00 Test (No process soil)

SORTER 1 LOG DATA FOR 19-Feb-93



### JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 19-Feb-93



A-331

SORTER 2 19-Feb-93				
AVERAGE BACKGROUND COUNT RATE	0.79	± 0.02 c/sec		
	1.15 ton	s/m³		
SORTER SOIL DENSITY GROUND SOIL DENSITY	1.65 ton	s/m³		
CKOOND SOLE DEWALL!		CONTAMINATED	CLEAN	
MASS TOTAL		0.25 tons	60.0 ton	s
MAXIMUM/SORT		3.3 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	50.2 kg	
HINDRY SOM				
WEIGHT RECOVERY OR VOLUME RECOVERY				99.6%
EQUIVALENT SOIL-IN-GROUND		0.20 yd³	47.6 yd³	47.8 yd3/day
LEG: WELL				
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	<b>:</b> )			
TOTAL		1,582 kBq		
MAXIMUM/SORT		71 k8q		
MINIMUM/SORT		2.9 kBq		
,				
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTIVITY	995 kBq	3,129 kBq	
MAXIMUM/SORT		41 kBq	14 kBq	
MINIMUM/SORT		0 Bq	-8 k8q	
SPECIFIC ACTIVITY		3,911 Bq/kg	52 Bq/	kg
WORK HISTORY			as 30 au	
WORK DAY START	07:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	07:00 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	10:45 AM	END SOIL PROCESSING	04:59 PM 0.5 hr	
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 111	
		10.0 hr		
WORK HOURS		10.0 hr		
AVAILABLE HOURS				
	S (total 20-sec record	3.75 hr		
DOWN-TIME		3.11 hr		
TOTAL SYSTEM PAUSE		0.0 hr		
NONAVAILABLE HOURS		3.75 hr		•
START-UP		0.50 hr		
SHUT-DOWN PLANT PERFORMANCE		62.5%		
PRODUCTIVITY		62.5%		
PRODUCTIVITY				
TOTAL SOIL PROCESSING RECORDS (2-SE	C and 20-SEC)	1,243		
NONPROCESS RECORDS (Test, calibrati		7		
20-SEC PROCESS RECORDS	,	1,125		
TOTAL SORT		0=DMM & 0 <dm 0<="" td=""><td></td><td></td></dm>		
NO SORT		8 0=0M & 0=0A		
SOME SORT		259 AD>0&0 <hd<hnu< td=""><td>max&amp;MND<mndma< td=""><td>x</td></mndma<></td></hd<hnu<>	max&MND <mndma< td=""><td>x</td></mndma<>	x
UNEXPLAINED RECORDS	;	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		UNEXPLAIN	PAUSE
AD=0 & M	<b>0</b> a		TIME	TIME
AD<0 & M	<b>0</b> a		None	07:38
ACT_P <5 kBq	31 26.3%			

2-SEC CO	UNT PERIODS				11,250		
	2-SEC RECOR	S WITH S	ORTS	_	118	(ACT_P	>0 kBq)
	2-SEC RECOR	S WITH P	OSITIVES	IN >1 DE	TECTOR		
	;	2 DETECTO	RS	19		90.5%	
	3	3 DETECTO	RS	2		9.5%	
	4	DETECTO	RS	0		0.0%	
	9	DETECTO	0		0.0%		
		S DETECTO	0		0.0%		
	;	7 DETECTO	RS	0		0.0%	
	1	B DETECTO	RS	0		0.0%	
	1	TOTAL		21			
	NET 2-SEC RE	CORDS WI	TH SORTS		97		
	2-SEC PERIO	S WITH N	O SORTS		11,153		
	AVG TIME BET	WEEN 2-SI	232.0 sec				
SORTS	· 61	ACT_ND	NUMBER	SPEC_A			CT_P
R SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)

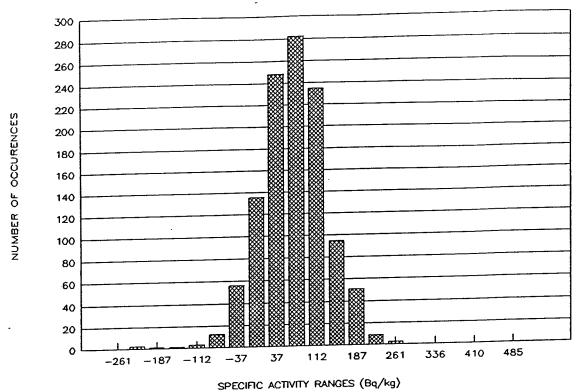
1-GATE	SORTS	· 61	ACT ND	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECT		FREQ%	(Bq)		(Bq/kg)	(Bq)	(#)		(kBq)
			•						
1	3	4.9%	-14000	0	-261	4000	17	14.4%	4
2	15	24.6%	-12000	2	-224	8000	40	33.9%	8
3	8	13.1%	-10000	1	-187	12000	21	17.8%	12
4	12	19.7%	-8000	1	-149	16000	10	8.5%	16
5	12	19.7%	-6000	3	-112	20000	10	8.5%	20
6	5	8.2%	-4000	12	-75	24000	5	4.2%	24
7	5	8.2%	-2000	56	-37	28000	2	1.7%	28
8	1	1.6%	0	135	0	32000	2	1.7%	32
TOTAL	61		2000	248	37	36000	3	2.5%	36
			4000	282	75	40000	0	0.0%	40
2-GATE	SORTS	57	6000	235	112	44000	1	0.8%	44
DETECT	R SORTS	FREQ%	8000	95	149	48000	0	0.0%	48
8			10000	51	187	52000	2	1.7%	52
9	6	10.5%	12000	9	224	56000	2	1.7%	56
10	12	21.1%	14000	2	261	60000	0	0.0%	60
11	11	19.3%	16000	0	299	64000	1	0.8%	64
12	11	19.3%	18000	0	336	68000	1	0.8%	68
13	7	12.3%	20000	0	373	72000	1	0.8%	72
14	5	8.8%	22000	0	410	76000	0	0.0%	76
15	5	8.8%	24000	0	448	80000	. 0	0.0%	80
TOTAL	57		26000	0	485	84000	0	0.0%	84
			>28000	0	0	>84000	0	0.0%	>84
			TOTAL	1132		TOTAL	118		
SUMMAR	Y TOTALS								
	HOT PARTI	CLE EVENTS	122		SORTS BY	ONE GATE ONLY	61		

HOT PARTICLE EVENTS 122 SORTS BY ONE GATE ONLY 61
MULTIPARTICLE EVENTS 253 SORTS BY TWO GATES 57
DISTRIBUTED EVENTS 0

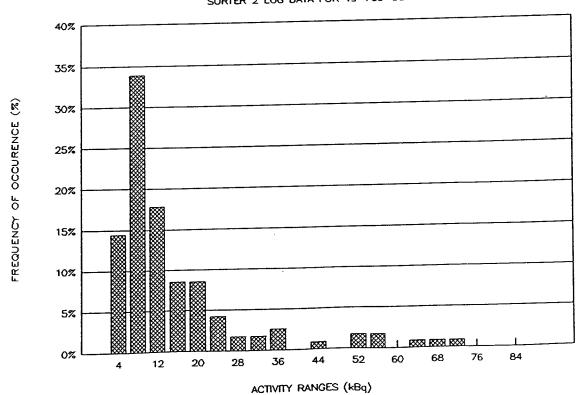
#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 19-Feb-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 19-Feb-93



A-334

SORTER 1 18-Feb	1-93							
AVERAGE BACKGROUND COUN	T RATE	-	0.72	± 0.04	c/sec			
SORTER SOIL DENSITY			1.15 ton	ns/m³				
GROUND SOIL DENSITY			1.65 ton	ns/m³				
					CONTAM	INATED	CLEAN	
MASS TOTAL					0.20	tons	83.5 tons	
MAXIMUM/SORT					3.3	kg	53.6 kg	
MINIMUM/SORT					0.7	kg	50.2 kg	
WEIGHT RECOVERY OR VOLU	ME RECOVERY							99.8%
EQUIVALENT SOIL-IN-GROU	ND				0.16	Aq <sub>2</sub>	66.2 yd³	66.4 yd3/day
PARTICLE ACTIVITY (MAXI	MUM ESTIMATE)							
TOTAL					3,482	kBq		
MAXIMUM/SORT					504	kBq		
MINIMUM/SORT					2.6	kBq		
DISPERSED + PARTICLE (R	EALISTIC ESTIMAT	E) ACTIV	ITY		1,514	kBq	(972)kBq	
MAXIMUM/SORT					299	kBq	11 kBq	
MINIMUM/SORT					0	Bq	-14 kBq	
SPECIFIC ACTIVITY	Y				7,389	Bq/kg	(12)Bq/k	g
WORK HISTORY								
- WORK DAY START	07:	MA 00		•	WORK D	AY END	05:30 PM	
PLANT START-UP	07:	MA 00		1	PLANT S	SHUT-DOWN	05:30 PM	
START SOIL PROCES	SSING 08:	40 AM			END SO	IL PROCESSING	05:20 PM	
LUNCH START	11:	30 AM		i	LUNCH	PERIOD	0.5 hr	
WORK HO	URS					10.0 hr		
AVAILABI	LE HOURS					10.0 hr		
ACTUAL 6	PROCESS HOURS (to	otal 20-s	sec record	ds)		8.68 hr		
DOWN-TI	ME					1.32 hr		
TOTAL S	YSTEM PAUSE					1.67 hr		
NONAVAII	LABLE HOURS					0.0 hr		
START-UP	<b>,</b>					1.67 hr		
SHUT-DO	AN .					0.16 hr		
PLANT PE	ERFORMANCE					86.8%		
PRODUCTI						86.8%		
OTAL SOIL PROCESSING RE	ECORDS (2-SEC and	d 20-SEC)	)			1,735		
ONPROCESS RECORDS (Test	t, calibration, (	etc)				10		
20-SEC PROCESS RE	ECORDS				1,562			
TOTAL SO	ORT				0	0=0MM & 0<0M		
NO SORT					1,371	AD=0 & MD=0 &	MND>0	
SOME SOR	≀т				191	AD>0&0 <and< td=""><td>max&amp;MND∢MNDmax</td><td></td></and<>	max&MND∢MNDmax	
UNEXPLAI	INED RECORDS				0			
0 <ad<1kb< td=""><td>0&lt;0M &amp; p</td><td>0</td><td></td><td></td><td></td><td></td><td>UNEXPLAIN</td><td>PAUSE</td></ad<1kb<>	0<0M & p	0					UNEXPLAIN	PAUSE
	AD=0 & MD	0					TIME	TIME
	AD < 0 & MD	0					None	06:59
ACT_P <5	kBq	53	30.6%					

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2-SEC COUNT PERIODS	15,62	0	
2-SEC RECORDS WITH SORTS	17	$3 (ACT_P > 0 kBq)$	
2-SEC RECORDS WITH POSITIVES	IN >1 DETECTO	R	
2 DETECTORS	46	82.1%	
3 DETECTORS	9	16.1%	
4 DETECTORS	1	1.8%	
5 DETECTORS	0	0.0%	
6 DETECTORS	0	0.0%	
7 DETECTORS	0	0.0%	
8 DETECTORS	0	0.0%	
TOTAL	56		
NET 2-SEC RECORDS WITH SORTS	11	7	
2-SEC PERIODS WITH NO SORTS	15,503		
AVG TIME BETWEEN 2-SEC SORTS	267.	0 sec	

1-GATE SO	ORTS	89	ACT_ND	NUMBER	SPEC_A	ACT_P		FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(pg)	(#)		(kBq)
1	6	6.7%	-14000	0	-261	4000	22	12.7%	4
2	10	11.2%	-12000	4	-224	8000	72	41.6%	8
3	8	9.0%	-10000	0	-187	12000	22	12.7%	12
4	23	25.8%	-8000	3	-149	16000	15	8.7%	16
5	19	21.3%	-6000	29	-112	20000	7	4.0%	20
6	11	12.4%	-4000	164	-75	24000	4	2.3%	24
7	6	6.7%	-2000	336	-37	28000	6	3.5%	28
8	6	6.7%	0	418	0	32000	2	1.2%	32
TOTAL	89		2000	324	37	36000	2	1.2%	36
	-		4000	188	75	40000	2	1.2%	40
2-GATE SO	DRTS	84	6000	77	112	44000	1	0.6%	44
DETECTR	SORTS	FREQ%	8000	17	149	48000	1	0.6%	48
8	30113	1112411	10000	9	187	52000	1	0.6%	52
9	6	7.1%	12000	3	224	56000	2	1.2%	56
10	9	10.7%	14000	0	261	60000	2	1.2%	60
11	16	19.0%	16000	0	299	64000	3	1.7%	64
12	17	20.2%	18000	0	336	68000	3	1.7%	68
13	21	25.0%	20000	0	373	72000	0	0.0%	72
14	8	9.5%	22000	0	410	76000	1	0.6%	76
	7	8.3%	24000	0	448	80000	0	0.0%	80
15	<del>-</del>	0.3*	26000	0	485	84000	0	0.0%	84
TOTAL	84		>28000	0	0	>84000	5	2.9%	>84
			TOTAL	1572	•	TOTAL	173		
SUMMARY 1	Z IATO		IOIAL	1312					
	T PARTICL	E EVENTS	165		SORTS BY	ONE GATE ONLY	89		
			138			TWO GATES	84		
M	JLTIPARTIC	LE EVENTS	138		SOKIS BY	INO GAIES			

#### REC CODE EXPLANATION

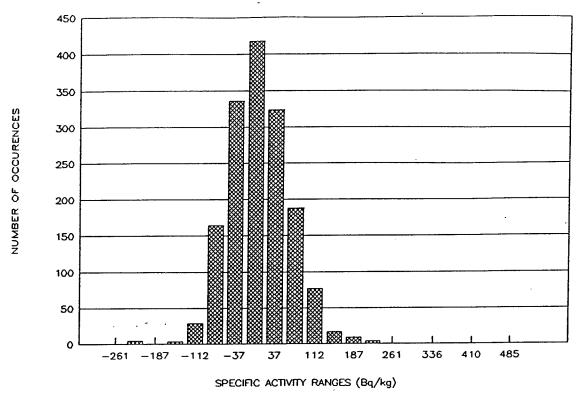
1.00 Source check (Soil on belt)

2.00 Empty belt

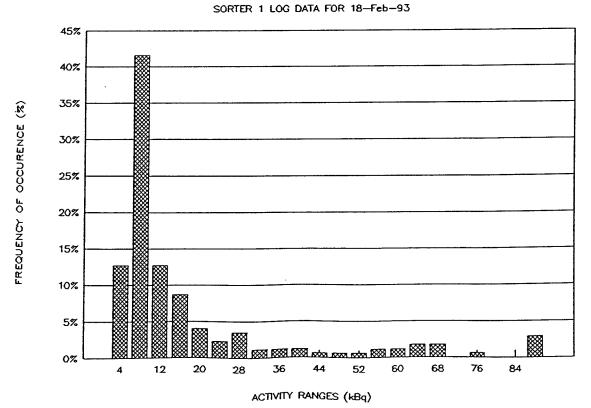
DISTRIBUTED EVENTS 0

3.00 Test (No process soil)

SORTER 1 LOG DATA FOR 18-Feb-93



# JA SOIL CLEANUP PLANT HOT PARTICLES



A-337

SORTER 2 18-Feb-93										
AVERAGE BACKGROUND COUNT RATE	•	0.79	±	0.04	c/sec					
SORTER SOIL DENSITY		1.15	tons/m	3						
GROUND SOIL DENSITY		1.65	tons/m	13						
GROOMS SOLE SELECTION					CONTAM	INATED	CLEAN			
MASS TOTAL						tons		tons		
MAXIMUM/SORT						kg	53.6			
MINIMUM/SORT					0.7	kg	49.5	kg		
									99.5%	
WEIGHT RECOVERY OR VOLUME RECOVERY								19	46.3 yd <sup>3</sup> /	day
EQUIVALENT SOIL-IN-GROUND					0.24	Aq <sub>3</sub>	46.1	yu-	40.3 yu /	uay
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	)				. =					
TOTAL					1,709	•				
MAXIMUM/SORT					· 126	•				
MINIMUM/SORT					2.9	kBq				
					4 477	ŁDa.	3,083	kBa		
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTIV	/ITY			1,173	*	=	kBq		
MAXIMUM/SORT						kBq		kBq		
MINIMUM/SORT						Bq Ba/ka		Bq/kg		
SPECIFIC ACTIVITY					2,000	Bq/kg		- 4,		
WORK HISTORY					חטפג ט	AY END	05:30 PM			
WORK DAY START	07:00 AM					SHUT-DOWN	05:30 PM			
PLANT START-UP	07:00 AM					IL PROCESSING	04:51 PM			
START SOIL PROCESSING	10:47 AM					PERIOD	0.5	hr		
LUNCH START	11:30 AM									
THOUSE HOUSE						10.0 hr				
WORK HOURS  AVAILABLE HOURS						10.0 hr				
ACTUAL PROCESS HOUR	S (total 20	-sec r	ecords)	)		6.06 hr				
DOWN-TIME	5 (10101 25					3.94 hr				
TOTAL SYSTEM PAUSE						3.80 hr				
NONAVAILABLE HOURS						0.0 hr				
START-UP						3.80 hr				
SHUT-DOWN						0.64 hr				
PLANT PERFORMANCE						60.6%				
PRODUCTIVITY						60.6%				
TOTAL SOIL PROCESSING RECORDS (2-SE	C and 20-SE	C)				1,213				
NONPROCESS RECORDS (Test, calibrati						5				
20-SEC PROCESS RECORDS					1,091					
TOTAL SORT						0=0MM & 0<0M (				
NO SORT						3 AD=0 & MD=0 8		MUway		
SOME SORT						S AD>0&0≪MD≪MNI	JIIIZAMNU≺P	MUNICA		
UNEXPLAINED RECORDS					(	J	UNEXPLAI	u	PAUSE	
0 <ad<1kbq &="" md="">0</ad<1kbq>	0						TIME	, ri	TIME	
AD=0 & F							None		06:59	
AD<0 & P							NO.K			
ACT_P <5 kBq	31	25.4	%							

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2-SEC COUNT PERIODS	10,910	)
2-SEC RECORDS WITH SORTS	122	(ACT_P >0 kBq)
2-SEC RECORDS WITH POSITIVES	IN >1 DETECTOR	
2 DETECTORS	23	79.3%
3 DETECTORS	6	20.7%
4 DETECTORS	0	0.0%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL	29	
NET 2-SEC RECORDS WITH SORTS	93	
2-SEC PERIODS WITH NO SORTS	10,817	
AVG TIME BETWEEN 2-SEC SORTS	234.6	sec

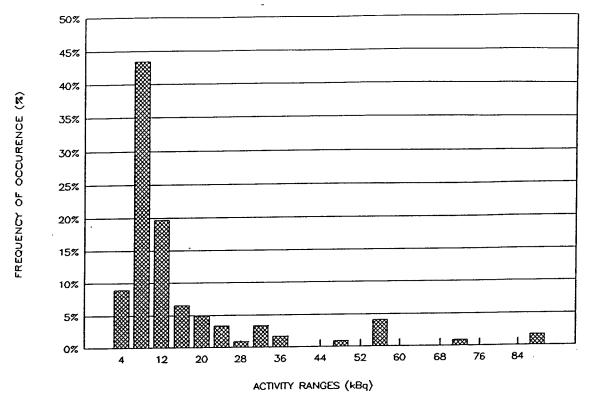
1-GATE S	ORTS	64	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT	FREQX	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	3	4.7%	-14000	0	-261	4000	11	9.0%	4
2	8	12.5%	-12000	1	-224	8000	53	43.4%	8
3	9	14.1%	-10000	2	-187	12000	24	19.7%	12
4	14	21.9%	-8000	0	-149	16000	8	6.6%	16
5	13	20.3%	-6000	2	-112	20000	6	4.9%	20
6	7	10.9%	-4000	22	-75	24000	4	3.3%	24
7	9	14.1%	-2000	78	-37	28000	1	0.8%	28
8	1	1.6%	0	141	0	32000	4	3.3%	32
TOTAL	64		2000	225	37	36000	2	1.6%	36
			4000	241	75	40000	0	0.0%	40
2-GATE S	ORTS	58	6000	192	112	44000	0	0.0%	44
DETECTR	SORTS	FREQ%	8000	103	149	48000	1	0.8%	48
8			10000	43	187	52000	0	0.0%	52
9	6	10.3%	12000	18	224	56000	5	4.1%	56
10	13	22.4%	14000	15	261	60000	0	0.0%	60
11	8	13.8%	16000	8	299	64000	0	0.0%	64
12	11	19.0%	18000	5	336	68000	0	0.0%	68
13	5	8.6%	20000	0	373	72000	1	0.8%	72
14	9	15.5%	22000	0	410	76000	0	0.0%	76
15	6	10.3%	24000	0	448	80000	0	0.0%	80
TOTAL	58		26000	0	485	84000	0	0.0%	84
			>28000	0	0	>84000	2	1.6%	>84
			TOTAL	1096		TOTAL	122		
SUMMARY 1	OTALS								
HC	T PARTICLE	E EVENTS	122	:	SORTS BY	ONE GATE ONLY	64		
ML	ILT I PARTICI	LE EVENTS	325	:	SORTS BY	TWO GATES	58		
D1	STRIBUTED	EVENTS	0						

#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

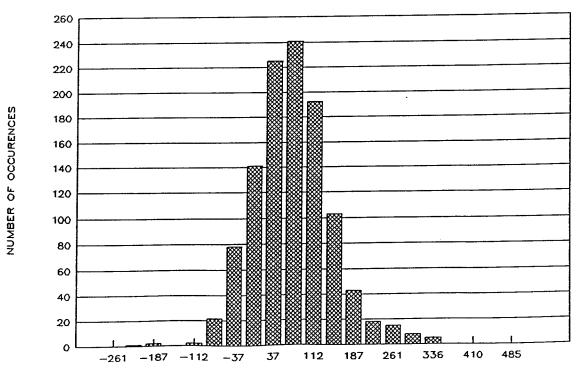
# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 18-Feb-93



### CLEAN SOIL SPECIFIC ACTIVITY

SORTER 2 LOG DATA FOR 18-Feb-93



SPECIFIC ACTIVITY RANGES (Bq/kg)

SORTER 2 17-Feb-93				
AVERAGE BACKGROUND COUNT RATE	0.79	± 0.04 c/sec		
SORTER SOIL DENSITY	1.15 to	ons/m³		
GROUND SOIL DENSITY	1.65 to	ons/m³		
drooms sore server.		CONTAMINATED	CLEAN	
MASS TOTAL		0.63 tons	93.6 ton	s
MAXIMUM/SORT		53.6 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	48.2 kg	
HIRIHON/ SON!		•		
WEIGHT RECOVERY OR VOLUME RECOVER'	1			99.3%
EQUIVALENT SOIL-IN-GROUND		0.50 yd <sup>3</sup>	74.2 yd³	74.7 yd³/day
PARTICLE ACTIVITY (MAXIMUM ESTIMA	(E)	7 773 kom		
TOTAL		3,732 kBq		
MAXIMUM/SORT		181 kBq		
MINIMUM/SORT		2.2 kBq		
DISPERSED + PARTICLE (REALISTIC ES	STIMATE) ACTIVITY	2,330 kBq	6,031 kBq	
MAXIMUM/SORT		167 kBq	18 kBq	
MINIMUM/SORT		0 Bq	-6 k8q	
SPECIFIC ACTIVITY		3,715 Bq/kg	64 Bq/	kg
Si Cott to Notititi		, , ,	-	
WORK HISTORY				
WORK DAY START	06:30 AM	WORK DAY END	05:30 PM	
PLANT START-UP	06:30 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	06:54 AM	END SOIL PROCESSING	05:13 PM	
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr	
		10.5 hr		
WORK HOURS		10.5 hr		
AVAILABLE HOURS				
	RS (total 20-sec reco	0.73 hr		
DOWN-TIME		0.56 hr		
TOTAL SYSTEM PAUSE		0.0 hr		
NONAVAILABLE HOURS		0.41 hr		
START-UP		0.28 hr		
SHUT-DOWN		93.0%		
PLANT PERFORMANCE		93.0%	•	
PRODUCTIVITY		73.0%		
TOTAL SOIL PROCESSING RECORDS (2-S	EC and 20-SEC)	1,996		
NONPROCESS RECORDS (Test, calibrat	ion, etc)	9		
20-SEC PROCESS RECORDS		1,758		
TOTAL SORT		2 MD>0 & MND=0		
NO SORT		1,231 AD=0 & MD=0 &	MND>0	
SOME SORT		525 AD>0&0 4MD 4MN0	max&MND <mndma< td=""><td>(</td></mndma<>	(
UNEXPLAINED RECORD	s	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		UNEXPLAIN	PAUSE
& O=0 &			. TIME	TIME
& 0>DA			None	06:54
ACT_P <5 kBq	73 30.7%			
<del>-</del>				

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2-SEC COUNT PERIODS	17,	,580
2-SEC RECORDS WITH SORTS	_	238 (ACT_P >0 kBq)
2-SEC RECORDS WITH POSITIVES	IN >1 DETEC	CTOR
2 DETECTORS	42	87.5%
3 DETECTORS	5	10.4%
4 DETECTORS	1	2.1%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL		48
NET 2-SEC RECORDS WITH SORTS		190
2-SEC PERIODS WITH NO SORTS	17,	390
AVG TIME BETWEEN 2-SEC SORTS	18	5.1 sec

1-GATE S	ORTS	127	ACT ND	NUMBER	SPEC_A	ACT_P	SORT	FREQX	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	7	5.5%	-14000	1	-261	4000	33	13.9%	4
2	19	15.0%	-12000	0	-224	8000	98	41.2%	8
3	14	11.0%	-10000	6	-187	12000	28	11.8%	12
4	30	23.6%	-8000	0	-149	16000	24	10.1%	16
5	27	21.3%	-6000	2	-112	20000	8	3.4%	20
6	13	10.2%	-4000	. 14	-75	24000	4	1.7%	24
7	14	11.0%	-2000	72	-37	28000	9	3.8%	28
8	3	2.4%	0	170	0	32000	6	2.5%	32
TOTAL	127		2000	333	37	36000	6	2.5%	36
			4000	424	<b>7</b> 5	40000	0	0.0%	40
2-GATE SO	ORTS	111	6000	381	112	44000	1	0.4%	44
DETECTR	SORTS	FREQ%	8000	215	149	48000	2	0.8%	48
8			10000	96	187	52000	2	0.8%	52
9	16	14.4%	12000	37	224	56000	3	1.3%	56
10	10	9.0%	14000	11	261	60000	3	1.3%	60
11	17	15.3%	16000	2	299	64000	4	1.7%	64
12	27	24.3%	18000	3	336	68000	2	0.8%	68
13	18	16.2%	20000	0	373	72000	0	0.0%	72
14	13	11.7%	22000	0	410	76000	1	0.4%	76
15	10	9.0%	24000	0	448	80000	0	0.0%	80
TOTAL	111		26000	0	485	84000	1	0.4%	84
TOTAL	•••		>28000	0	0	>84000	3	1.3%	>84
			TOTAL	1767		TOTAL	238		
SUMMARY T	OTALS		<del>-</del>						
	T PARTICL	E EVENTS	241		SORTS BY	ONE GATE ONLY	127		
		LE EVENTS	526			TWO GATES	111		
	STRIBUTED		160						
0.	J. N. 1001 LU								

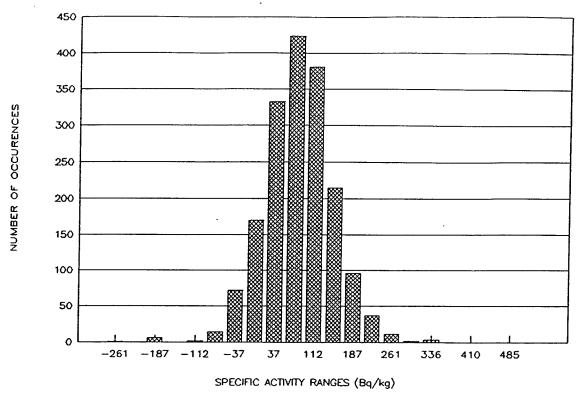
#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

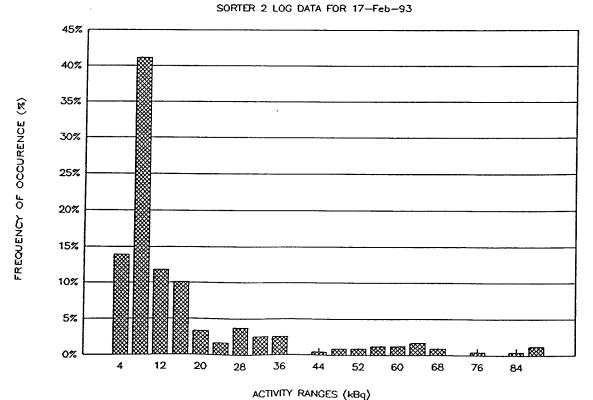
2.00 Empty belt

3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 17-Feb-93



### JA SOIL CLEANUP PLANT HOT PARTICLES



SORTER 2 16-Feb-93				
AVERAGE BACKGROUND COUNT RATE	0.79 ± 0.0	3 c/sec		
SORTER SOIL DENSITY	1.15 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³			
GROOMS SOLE SELECT		CONTAMINATED	CLEAN	
MASS TOTAL		0.50 tons	93.8 tons	
MAXIMUM/SORT		4 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	49.5 kg	
				99.5%
WEIGHT RECOVERY OR VOLUME RECOVERY		6.46 J.	74.3 yd <sup>3</sup>	74.7 yd3/day
EQUIVALENT SOIL-IN-GROUND		0.40 yd³	74.5 /4	7411 /2 / 25/
ANALYS ANALYS ANALYS ME COTTMAT	·C1			
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	τ,	4,750 kBq		
TOTAL		209 kBq	•	
MAXIMUM/SORT		2.7 kBq		
MINIMUM/SORT		·		
DISPERSED + PARTICLE (REALISTIC ES	TIMATEL ACTIVITY	2,581 kBg	5,165 kBq	•
	MINITE NOTITIES	159 kBq	16 kBq	
MAXIMUM/SORT		0 Bq	-11 k8q	
MINIMUM/SORT  SPECIFIC ACTIVITY		5,143 Bq/kg	55 Bq/kg	
SPECIFIC ACTIVITY				
WORK HISTORY		LIGHT DAY FUD	05:30 PM	
WORK DAY START	06:30 AM	WORK DAY END	05:30 PM	
PLANT START-UP	06:30 AM	PLANT SHUT-DOWN END SOIL PROCESSING		
START SOIL PROCESSING	06:50 AM	LUNCH PERIOD	0.5 hr	•
LUNCH START	11:30 AM	LUNCH PERIOD	•••	
WORK HOURS		10.5 hr		• •
AVAILABLE HOURS		10.5 hr		
	JRS (total 20-sec records)	9.77 hr		
DOWN-TIME	(1000)	0.73 hr		
TOTAL SYSTEM PAUS	·	0.72 hr		
NONAVAILABLE HOUR		0.0 hr		
START-UP		0.34 hr		
SHUT-DOWN		0.17 hr		
. PLANT PERFORMANCE		93.1%		
PRODUCTIVITY		93.1%		
	nen 1 30-85C)	2,012		
TOTAL SOIL PROCESSING RECORDS (2-		9		
NONPROCESS RECORDS (Test, calibra	tion, etc)	1,759		
20-SEC PROCESS RECORDS		0 MD>0 & MND=0		
TOTAL SORT		1,253 AD=0 & MD=0 &	R MND>0	
NO SORT SOME SORT		506 AD>0&0<0MD<0MI		
UNEXPLAINED RECOR	os	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	2		UNEXPLAIN	PAUSE
AD=0	_	i	TIME	TIME
AD-0 & AD<0 &	-		09:19:31	06:50
ACT_P <5 kBq	73 28.9%		15:40:31	
1017.				

Printed on 05/22/93 at 10:42:44 AM

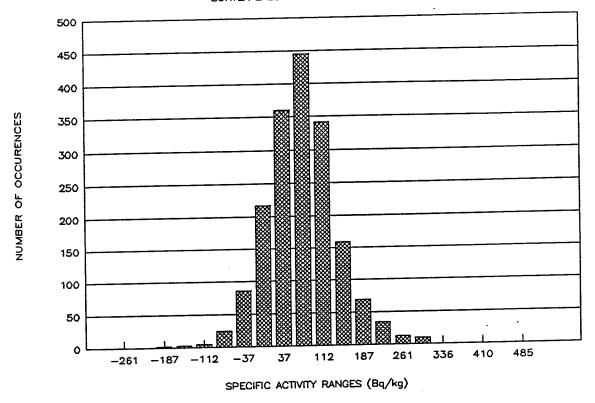
2-	SEC CO	UNT PE	R100S				17,590				
		2-SEC	RECOR	DS WITH S	ORTS		253	(ACT_P	· >0	kBq)	1
		2-SEC	RECOR	DS WITH P	OSITIVES	IN >1 D	ETECTOR				
				2 DETECTO	RS	58		84.1%			
			:	3 DETECTO	RS	9		13.0%			
				4 DETECTO	RS	2		2.9%			
				5 DETECTO	RS	0		0.0%			
				6 DETECTO	RS	0		0.0%			
			•	7 DETECTO	RS	0		0.0%			
				B DETECTO	RS	0		0.0%			
				TOTAL			69				
		NET 2	SEC RI	ECORDS WI	TH SORTS		184				
		2-SEC	PERIO	S WITH N	SORTS		17,406				
		AVG T	ME BE	TWEEN 2-SI	EC SORTS		191.2	sec			
sol	RTS		132	ACT_ND	NUMBER	SPEC_A			ACT_	Ρ.	S
	SORTS	1	REQ%	(Bq)		(Bq/kg)			(Bq	)	

1-GATE S	ORTS	132	ACT_ND	NUMBER	SPEC_A	· ACT_P	. SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	4	3.0%	-14000	0	-261	4000	25	9.9%	4
2	16	12.1%	-12000	0	-224	8000	115	45.5%	8
3	13	9.8%	-10000	2	-187	12000	33	13.0%	12
4	31	23.5%	-8000	3	-149	16000	8	3.2%	16
5	28	21.2%	-6000	5	-112	20000	10	4.0%	20
6	20	15.2%	-4000	24	-75	24000	12	4.7%	24
7	15	11.4%	-2000	86	-37	28000	9	3.6%	28
8	5	3.8%	0	217	0	32000	7	2.8%	32
TOTAL	132		2000	360	37	36000	5	2.0%	36
			4000	445	75	40000	1	0.4%	40
2-GATE SO	ORTS	121	6000	341	112	44000	2	0.8%	44
DETECTR	SORTS	FREQ%	8000	159	149	48000	1	0.4%	48
8			10000	69	187	52000	1	0.4%	52
9	7	5.8%	12000	34	224	56000	5	2.0%	56
10	13	10.7%	14000	13	261	60000	2	0.8%	60
11	20	16.5%	16000	10	299	64000	3	1.2%	64
12	28	23.1%	18000	0	336	68000	1	0.4%	68
13	28	23.1%	20000	0	373	72000	1	0.4%	72
14	17	14.0%	22000	0	410	76000	0	0.0%	76
15	8	6.6%	24000	0	448	80000	1	0.4%	80
TOTAL	121		26000	0	485	84000	0	0.0%	84
			>28000	0	0	>84000	11	4.3%	>84
			TOTAL	1768		TOTAL	253		
SUMMARY 1	OTALS								
	T PARTIC	E EVENTS	252		SORTS BY	ONE GATE ONLY	132		
		LE EVENTS	488			TWO GATES	121		
	STRIBUTED		0						
٠.			•						

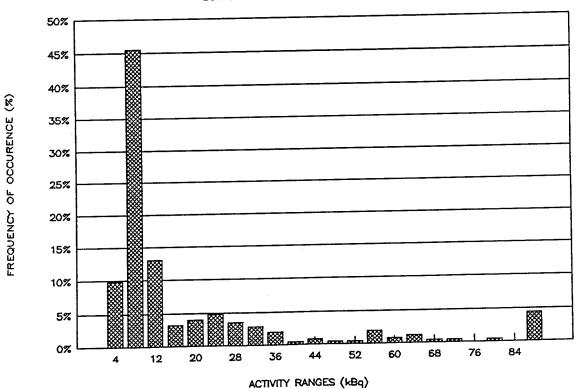
#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 16-Feb-93



### JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 16-Feb-93



SORTER 1 15-Feb-93				
AVERAGE BACKGROUND COUNT RATE	0.73 ±	0.05 c/sec		
SORTER SOIL DENSITY	1.15 tons/m <sup>3</sup>			
GROUND SOIL DENSITY	1.65 tons/m³			
drooms sore sensiti		CONTAMINATED	CLEAN	
MASS TOTAL		0.28 tons	72.1 tons	
MAXIMUM/SORT		3.3 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	50.2 kg	
111111111111111111111111111111111111111			_	
WEIGHT RECOVERY OR VOLUME RECOVERY				99.6% -
EQUIVALENT SOIL-IN-GROUND		0.22 yd³	57.2 yd³	57.4 yd3/day
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	:)			
TOTAL		4,055 kBq		
MAXIMUM/SORT -		. 584 kBq		
MINIMUM/SORT		2.5 kBq		
	THATEL ACTIVITY	1,684 kBq	(560)k8q	
DISPERSED + PARTICLE (REALISTIC EST	IMAIE) ACTIVITY	354 kBq	16 kBq	
MAXIMUM/SORT		0 Bq	-12 kBq	
MINIMUM/SORT SPECIFIC ACTIVITY		6,044 Bq/kg	(8)Bq/kg	
SPECIFIC ACTIVITY		0,011 04,13	( -	
WORK HISTORY	•			
WORK DAY START	07:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	07:00 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	09:34 AM	END SOIL PROCESSING	05:08 PM	
LUNCH START	12:00 AM	LUNCH PERIOD	0.0 hr	
		40.51		
WORK HOURS		10.5 hr		
AVAILABLE HOURS		10.5 hr		
	S (total 20-sec records)	7.51 hr		
DOWN-TIME		2.99 hr		
TOTAL SYSTEM PAUSE		1.33 hr		
NONAVAILABLE HOURS		0.0 hr 2.58 hr		
START-UP		2.38 nr 0.36 hr		
SHUT-DOWN		71.5%		
PLANT PERFORMANCE		71.5%		
PRODUCTIVITY		11.34		
TOTAL SOIL PROCESSING RECORDS (2-SE	C and 20-SEC)	1,612		
NONPROCESS RECORDS (Test, calibrati		24		
20-SEC PROCESS RECORDS	•	1,351		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		1,110 AD=0 & MD=0 8	MND>0	
SOME SORT		241 AD>0&0 <md<mn0< td=""><td>max&amp;MND<mndmax< td=""><td></td></mndmax<></td></md<mn0<>	max&MND <mndmax< td=""><td></td></mndmax<>	
UNEXPLAINED RECORDS		0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	1		UNEXPLAIN	PAUSE
AD=0 & M	D 0		TIME	TIME
AD<0 & M	D 0		13:25:27	08:14
ACT_P <5 kBq	91 34.9%	•		

261 (ACT\_P >0 kBq)

13,510

		Z JEC KECOKE						-		
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR				
		2	DETECTO	RS	56	78.9%				
		3	DETECTO	RS	13	18.3%				
		4	DETECTO	RS	2	2.8%				
		5	DETECTO	RS	0	0.0%				
		ć	DETECTO	RS	0	0.0%				
		7	DETECTO	RS	0	0.0%				
		8	DETECTO	RS	. 0	0.0%				
		Т	OTAL			71				
		NET 2-SEC RE				190				
		2-SEC PERIOD	S WITH N	O SORTS		13,320				
		AVG TIME BET	WEEN 2-S	EC SORTS		142.2 sec				
1-GATE	SORTS	134	ACT_ND	NUMBER	SPEC_A		ACT_P	SORT	FREQ%	ACT_P
DETECT			(Bq)		(Bq/kg)		(Bq)	(#)		(kBq)
DE TEC.			<b>4</b> - <b>1</b> -		, -					
1	2	1.5%	-14000	2	-261		4000	52	19.9%	4
2			-12000	3	-224		8000	112	42.9%	8
3		11.9%	-10000	7	-187		12000	23	8.8%	12
4		13.4%	-8000	10	-149		16000	19	7.3%	16
5	33	24.6%	-6000	50	-112	;	20000	7	2.7%	20
6	27	20.1%	-4000	133	-75	7	24000	14	5.4%	24
7		14.9%	-2000	297	-37	7	28000	9	3.4%	28
8	5	3.7%	0	300	0	3	32000	3	1.1%	32
TOTAL	134		2000	291	37	3	36000	5	1.9%	36
			4000	151	75	4	40000	2	0.8%	40
2-GATE	SORTS	127	6000	61	112	4	44000	0	0.0%	44
DETECT	R SORTS	FREQ%	8000	32	149	4	48000	2	0.8%	48
8	1		10000	14	187	9	52000	1	0.4%	52
9	8	6.3%	12000	13	224		56000	1	0.4%	56
10	16	12.6%	14000	9	261	ć	50000	2	0.8%	60
11	9	7.1%	16000	2	299	•	54000	1	0.4%	64
12	25	19.7%	18000	0	336	•	58000	0	0.0%	68
13	33	26.0%	20000	0	373	7	72000	4	1.5%	72
14	25	19.7%	22000	0	410	7	76000	1	0.4%	76
15	11	8.7%	24000	0	448	8	30000	0	0.0%	80
TOTAL	127		26000	0	485	8	34000	0	0.0%	84
			>28000	0	0		34000	3	1.1%	>84
			TOTAL	1375		1	TATO	261		
SUMMAR	Y TOTALS									
	HOT PART	ICLE EVENTS	259			ONE GATE ONLY	ſ	134		
	MULTIPART	TICLE EVENTS	157		SORTS BY	TWO GATES		127		

#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

2.00 Empty belt

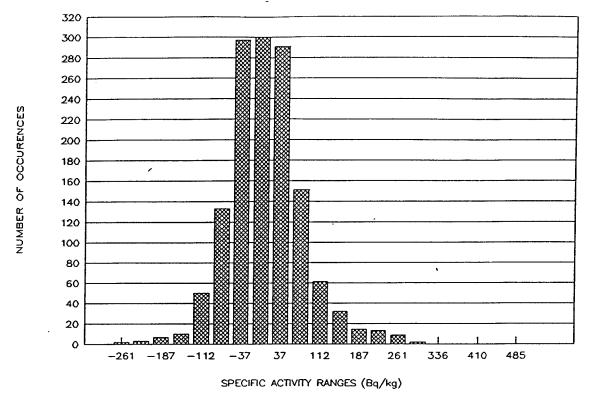
DISTRIBUTED EVENTS

2-SEC COUNT PERIODS

2-SEC RECORDS WITH SORTS

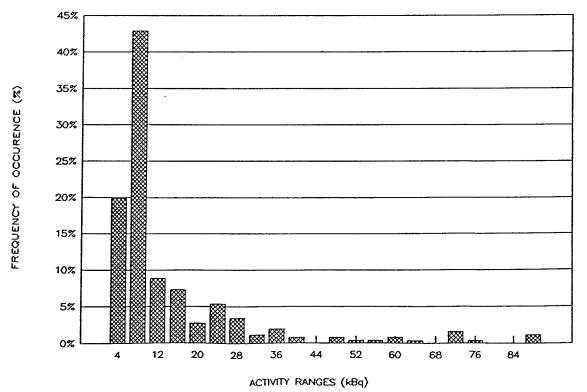
3.00 Test (No process soil)

SORTER 1 LOG DATA FOR 15-Feb-93



### JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 15-Feb-93



A-349

SORTER 2 15-Feb-93									
AVERAGE BACKGROUND COUNT RATE		0.79	t	0.03 c/sec					
SORTER SOIL DENSITY		1.15	tons/m³						
GROUND SOIL DENSITY		1.65	tons/m³						
GROUND SOIL DEMOTIO				CONTA	MINATED	CLEAN			
MASS TOTAL				0.3	8 tons		tons		
MAXIMUM/SORT				4.	7 kg	53.6	kg		
MINIMUM/SORT				0.	7 kg	48.9	kg		
MINIMONY SORT									-
WEIGHT RECOVERY OR VOLUME RECOVERY								99.5%	
EQUIVALENT SOIL-IN-GROUND				0.3	0 yd3	56.9	Aq,	57.2 yd	·/day
Edo. McElli									
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	)								
TOTAL				•	2 kBq				
MAXIMUM/SORT					3 kBq				
MINIMUM/SORT				3.	2 kBq				
				2.24	0 1-0	3,217	kRa		
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTIV	/ITY		•	8 kBq	-	kBq		
MAXIMUM/SORT					4 kBq		kBq		
MINIMUM/SORT					0 Bq		Bq/kg		
SPECIFIC ACTIVITY				6,02	4 Bq/kg	72	DQJ N3		
WORK HISTORY				LINDY	DAY END	05:30 PM			
WORK DAY START	07:00 AM				SHUT-DOWN	05:30 PM			
PLANT START-UP	07:00 AM				OIL PROCESSING				
START SOIL PROCESSING	09:35 AM				PERIOD	0.0	hr		
LUNCH START	12:00 AM			LUNCH	PERIOD				
					10.5 hr		•		
WORK HOURS					10.5 hr				
AVAILABLE HOURS ACTUAL PROCESS HOUR	c (total 20	-sec ti	ecords)		7.48 hr				
DOWN-TIME	3 (totat 20	300 1	,		3.02 hr				
TOTAL SYSTEM PAUSE					1.33 hr				
NONAVAILABLE HOURS					0.0 hr				
START-UP					2.59 hr				
SHUT-DOWN					0.34 hr				
PLANT PERFORMANCE					71.3%				
PRODUCTIVITY					71.3%				
TOTAL SOIL PROCESSING RECORDS (2-SE	C and 20-SE	C)			1,567				
NONPROCESS RECORDS (Test, calibrati					29				
20-SEC PROCESS RECORDS				1,34					
TOTAL SORT					0 MD>0 & MND=0				
NO SORT					7 AD=0 & MD=0 8		MDmax		
SOME SORT					O AD>0&0 <nd⊲hn< td=""><td>лпах&amp;ми∪≪</td><td>KENTAN</td><td></td><td></td></nd⊲hn<>	лпах&ми∪≪	KENTAN		
UNEXPLAINED RECORDS	;				0	IMCVDI #1	ы	PAUSE	
0 <ad<1kbq &="" md="">0</ad<1kbq>	1					UNEXPLAT	п	TIME	
AD=0 & P	io o					TIME 11:00:28	<b>t</b>	08:14	
AD<0 & M						11:00:20	,	00.17	
ACT_P <5 kBq	55	25.0	7.						

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13,470

		2-SEC RECOR	DS WITH	SORTS		220	(ACT_P >0 k	Bq)		
		2-SEC RECOR	DS WITH	POSITIVES	IN >1 D		_			
			2 DETECTO	ORS	47	•	81.0%			
			3 DETECTO	ORS	10		17.2%			
			4 DETECTO	ORS	1		1.7%			
			5 DETECTO	ORS	0		0.0%			
			6 DETECTO	RS	0		0.0%			
			7 DETECTO	RS	0		0.0%			
		i	8 DETECTO	RS	0		0.0%			
		•	TOTAL			58				
		NET 2-SEC RI	ECORDS WI	TH SORTS		162				
		2-SEC PERIO	S WITH N	O SORTS		13,308				
		AVG TIME BET	TWEEN 2-S	EC SORTS		166.3	sec			
1-GATE S	ORTS	118	ACT_ND	NUMBER	SPEC_A		ACT_P	SORT	FREQ%	ÁCT P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(Bq)	(#)		(kBq)
							-			
1	7	5.9%	-14000	3	-261		4000	25	11.3%	4
2	16	13.6%	-12000	1	-224		8000	89	40.3%	8
3	16	13.6%	-10000	2	-187		12000	30	13.6%	12
4	26	22.0%	-8000	3	-149		16000	14	6.3%	16
5	. 22	18.6%	-6000	11	-112		20000	14	6.3%	20
6	18	15.3%	-4000	34	-75		24000	5	2.3%	24
7	12	10.2%	-2000	83	-37		28000	2	0.9%	28
8	1	0.8%	0	220	0		32000	5	2.3%	32
TOTAL	118		2000	280	37		36000	6	2.7%	36
			4000	321	75		40000	2	0.9%	40
2-GATE SO	ORTS	102	6000	222	112		44000	6	2.7%	44
DETECTR	SORTS	FREQ%	0008	102	149		48000	2	0.9%	48
8			10000	56	187		52000	2	0.9%	52
9	11	10.7%	12000	21	224		56000	3	1.4%	56
10	13	12.6%	14000	9	261		60000	2	0.9%	60
11	18	17.5%	16000	6	299		64000	3	1.4%	64
12	26	25.2%	18000	1	336		68000	3	1.4%	68
13	17	16.5%	20000	0	373		72000	3	1.4%	72
14	12	11.7%	22000	0	410		76000	2	0.9%	76
15	6	5.8%	24000	0	448		80000	0	0.0%	80
TOTAL	103		26000	0	485		84000	0	0.0%	84
			>28000	0	0		>84000	3	1.4%	>84
			TOTAL	1375			TOTAL	221		
SUMMARY TO										
HO.	PARTIC	LE EVENTS	215	\$	ORTS BY	ONE GATE	ONLY	118		
ARI 10	TIDADTI	O. C. C. C								

#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

342

0

2.00 Empty belt

MULTIPARTICLE EVENTS

DISTRIBUTED EVENTS

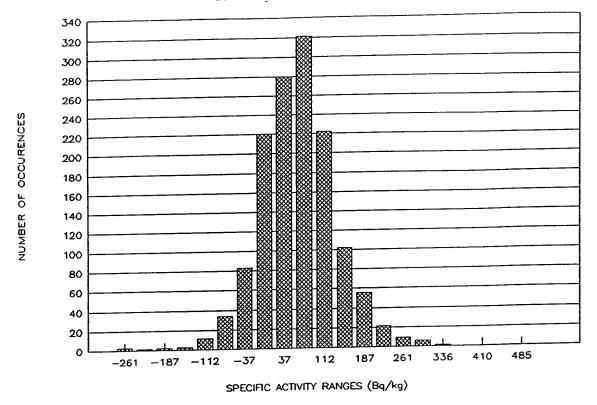
2-SEC COUNT PERIODS

3.00 Test (No process soil)

SORTS BY TWO GATES

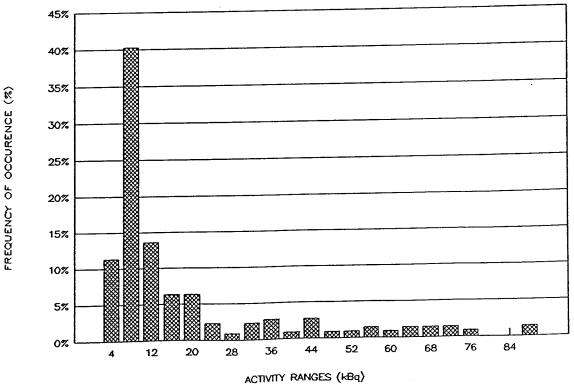
102

SORTER 2\_LOG DATA FOR 15-Feb-93



# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 15-Feb-93



A-352

SORTER 1 12-Feb-93				
AVERAGE BACKGROUND COUNT RATE	0.71 ± 0.	.06 c/sec		
SORTER SOIL DENSITY	1.15 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³			
		CONTAMINATED	CLEAN	
MASS TOTAL		0.27 tons	15.9 tor	ns
MAXIHUM/SORT		53.6 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	47.5 kg	
WEIGHT RECOVERY OR VOLUME RECOVER	Y			98.3%
EQUIVALENT SOIL-IN-GROUND	•	0.22 yd³	12.6 yd³	12.8 yd3/day
EMPLANEEN POLE IN CHOOSE		•	_	•
PARTICLE ACTIVITY (MAXIMUM ESTIMA	TE)			
TOTAL		6,832 kBq		
MAXIMUM/SORT	•.	2,251 kBq		
HINIHUM/SORT		2.6 kBq		
		2 554 60-	1 157 40-	
DISPERSED + PARTICLE (REALISTIC E	STIMATE) ACTIVITY	2,556 kBq	1,157 kBq 19 kBq	
MAXIMUM/SORT		1622 kBq 0 Bq	-7 kBq	•
MINIMUM/SORT		9,356 Bq/kg	73 Bq/	*
SPECIFIC ACTIVITY		7,330 Bq/kg	1.5 04)	~3
WORK HISTORY				
WORK DAY START	07:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	07:04 AM	PLANT SHUT-DOWN	05:16 PM	
START SOIL PROCESSING	03:34 PM	END SOIL PROCESSING		
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr	
WORK HOURS		10.0 hr		
AVAILABLE HOURS		9.7 hr		
	JRS (total 20-sec records)	1.67 hr		
DOWN-TIME		8.03 hr		
TOTAL SYSTEM PAUSE		5.98 hr		
NONAVAILABLE HOURS	5	0.3 hr		
START-UP		8.52 hr		
SHUT-DOWN		0.02 hr		
PLANT PERFORMANCE		17.2%		
PRODUCTIVITY		16.7%		
TOTAL SOIL PROCESSING RECORDS (2-5	SEC and 20-SEC)	443		
NONPROCESS RECORDS (Test, calibrat		794		
20-SEC PROCESS RECORDS	,,	301		
TOTAL SORT		2 MD>0 & MND=0		
NO SORT		188 AD=0 & MD=0 &	MND>0	
SOME SORT		111 AD>0&0 <md<mnd< td=""><td></td><td>x</td></md<mnd<>		x
UNEXPLAINED RECORD	es .	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		UNEXPLAIN	PAUSE
& D=0			TIME	TIME
AD<0 &			None	07:04
ACT_P <5 kBq	38 26.8%			10:46

2-SEC COUNT PERIODS						3,010					
2-SEC RECORDS WITH SORTS							(ACT_P	>0 kBq)			
2-SEC RECORDS WITH POSITIVES						TECTOR					
2 DETECTORS					31		81.6%				
		3	DETECTOR	≀S	6		15.8%				
		4	DETECTOR	RS	1		2.6%				
		5	DETECTOR	RS	0		0.0%				
		6	DETECTOR	RS	0		0.0%				
		7	DETECTOR	RS	0		0.0%				
		8	DETECTOR	RS	0		0.0%				
		T	OTAL			38					
		NET 2-SEC RE	CORDS WIT	TH SORTS		104					
		2-SEC PERIOD				2,906					
		AVG TIME BET				57.9	sec				
1-GATE SC	no T C	· 70	ACT ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
	SORTS	FREQ%	(Bq)		(Bq/kg)			(Bq)	(#)		(kBq)
DETECTR	30K13	I REST	<b>1-4</b> 2		•						
	7	2.8%	-14000	2	-261			4000	80	16.8%	4
1		10.5%	-12000	1	-224			8000	181	38.1%	8
2	26 25	10.1%	-10000	2	-187			12000	65	13.7%	12
3	25 36	14.5%	-8000	1	-149			16000	44	9.3%	16
4	30 49		-6000	3	-112			20000	27	5.7%	20
5	49 55	22.2%	-4000	9	-75			24000	19	4.0%	24
6	36		-2000	30	-37			28000	7	1.5%	28
7	14		0	90	0			32000	11	2.3%	32
8	248		2000	141	37			36000	7	1.5%	36
TOTAL	240		4000	164	75			40000	3	0.6%	40
2 0475 60	00.00	72	6000	129	112			44000	4	0.8%	44
2-GATE SC	SORTS		8000	89	149			48000	3	0.6%	48
DETECTR	SUKIS	, KEWA	10000	46	187			52000	0	0.0%	52
8	15	6.6%	12000	27	224			56000	3	0.6%	56
9			14000	17	261			60000	3	0.6%	60
10	19		16000	8	299			64000	2	0.4%	64
11	34		18000	2	336			68000	3	0.6%	68
12	41		20000	1	373			72000	1	0.2%	72
13	56	24.7%	20000					74000	1	0.2%	76

SUMMARY TOTALS

14

15

TOTAL

70 SORTS BY ONE GATE ONLY HOT PARTICLE EVENTS 142 72 SORTS BY TWO GATES 111 MULTIPARTICLE EVENTS DISTRIBUTED EVENTS 154

762

0

0

0

0

410

448

485

#### REC CODE EXPLANATION

38

24

227

1.00 Source check (Soil on belt)

22000

26000

>28000

TOTAL

16.7%

10.6% 24000

2.00 Empty belt

3.00 Test (No process soil)

76

80

84

>84

0.2%

0.0%

0.2%

2.1%

1

10

475

76000

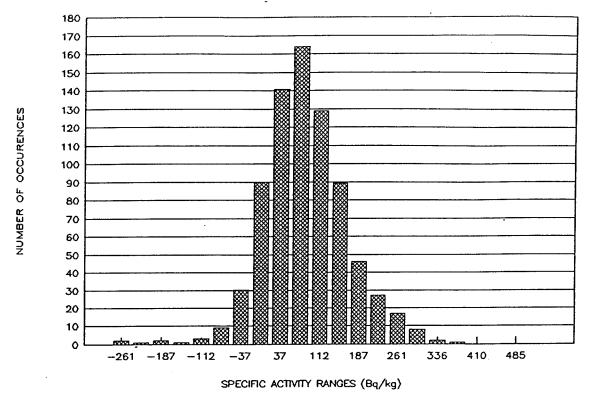
80000

84000

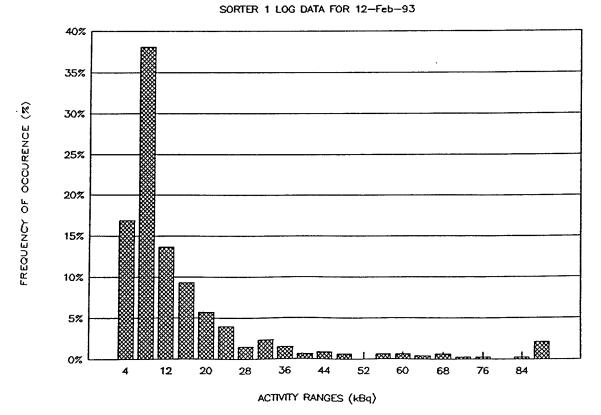
>84000

TOTAL

SORTER 1 LOG DATA FOR 12-Feb-93



## JA SOIL CLEANUP PLANT HOT PARTICLES



A-355

SORTER 2 12-Feb-93				
AVERAGE BACKGROUND COUNT RATE	0.76 ±	0.07 c/sec		
SORTER SOIL DENSITY	1.15 tons/m	3		
GROUND SOIL DENSITY	1.65 tons/m			
GROOND SOIL DENSITY		CONTAMINATED	CLEAN	
MASS TOTAL		0.39 tons	15.8 ton	s
MAXIMUM/SORT		53.6 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	46.2 kg	
				97.6%
WEIGHT RECOVERY OR VOLUME RECOVER	T	0.31 yd³	12.5 yd³	
EQUIVALENT SOIL-IN-GROUND		0.51 /4	12.5 /4	12.0 ya 700
PARTICLE ACTIVITY (MAXIMUM ESTIMA	TE)			
TOTAL		1,772 kBq		
MAXIMUM/SORT		132 kBq		•
MINIHUM/SORT		2.7 kBq		
DISPERSED + PARTICLE (REALISTIC E	STIMATEL ACTIVITY	1,031 kBq	232 kBq	
	SITINIC, NOTIVITY	105 kBq	17 kBq	
MAXIMUM/SORT		0 Bq	-10 kBq	
MINIMUM/SORT SPECIFIC ACTIVITY		2,667 Bq/kg	15 Bq/1	
SPECIFIC ACTIVITY		7, 7 .0	·	
WORK HISTORY				
WORK DAY START	07:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	07:04 AM	PLANT SHUT-DOWN	05:16 PM	
START SOIL PROCESSING	03:34 PM	END SOIL PROCESSING		
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr	
WORK HOURS		10.0 hr		
AVAILABLE HOURS		9.7 hr		
	URS (total 20-sec records)	1.68 hr		
DOWN-TIME		8.02 hr		
TOTAL SYSTEM PAUSI	<u> </u>	6.07 hr		
NONAVAILABLE HOURS		0.3 hr		
START-UP		8.50 hr		
SHUT-DOWN		0.02 hr		
PLANT PERFORMANCE		17.3%		
PRODUCTIVITY		16.8%		
ppossessus pscopps (2.4	CCC 20 CCC)	438		
TOTAL SOIL PROCESSING RECORDS (2-5		757		
NONPROCESS REGORDS (Test, calibrate 20-SEC PROCESS RECORDS	rion, etc)	302		
TOTAL SORT		4 MD>0 & MND=0		•
NO SORT		172 AD=0 & MD=0 8	MND>0	
NO SORT		126 AD>0&0 <md<mn0< td=""><td></td><td>(</td></md<mn0<>		(
	ac .	0		-
UNEXPLAINED RECORD	0	v	UNEXPLAIN	PAUSE
0 <ad<1kbq &="" md="">0 AD=0 &amp;</ad<1kbq>			TIME	TIME
AD<0 &			None	07:04
ACT P <5 kBq	32 23.5%			10:41
WOI_L A KEN	JC 23.3M			

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	NET 2-SEC RECORDS WITH SORTS 2-SEC PERIODS WITH NO SORTS	101 2,919	
	8 DETECTORS TOTAL	0 35	0.0%
	7 DETECTORS	0	0.0%
	5 DETECTORS 6 DETECTORS	0 0	0.0% 0.0%
	4 DETECTORS	0	0.0%
	3 DETECTORS	5	14.3%
	2-SEC RECORDS WITH POSITIVES 2 DETECTORS	30	85.7%
	2-SEC RECORDS WITH SORTS 2-SEC RECORDS WITH POSITIVES		(ACT_P >0 kBq)
2-SEC C	COUNT PERIODS	3,020	)

1-GATE S	ORTS	68	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	7	3.1%	-14000	12	-261	4000	43	9.6%	4
2	30	13.2%	-12000	7	-224	8000	169	37.6%	8
3	41	18.1%	-10000	10	-187	12000	67	14.9%	12
4	38	16.7%	-8000	28	-149	16000	40	8.9%	16
5	32	14.1%	-6000	52	-112	20000	15	3.3%	20
6	34	15.0%	-4000	100	-75	24000	20	4.5%	24
7	34	15.0%	-2000	128	-37	28000	15	3.3%	28
8	11	4.8%	0	140	0	32000	7	1.6%	32
TOTAL	227		2000	80	37	36000	3	0.7%	36
			4000	63	75	40000	10	2.2%	40
2-GATE SO	ORTS	68	6000	42	112	44000	8	1.8%	44
DETECTR	SORTS	FREQ%	8000	29	149	48000	6	1.3%	48
8			10000	21	187	52000	9	2.0%	52
9	19	8.6%	12000	7	224	56000	6	1.3%	56
10	<b>3</b> 2	14.4%	14000	16	261	60000	2	0.4%	60
11	41	18.5%	16000	5	299	64000	9	2.0%	64
12	43	19.4%	18000	6	336	68000	1	0.2%	68
13	31	14.0%	20000	0	373	72000	1	0.2%	72
14	33	14.9%	22000	0	410	76000	0	0.0%	76
15	23	10.4%	24000	0	448	80000	1	0.2%	80
TOTAL	222		26000	0	485	84000	2	0.4%	84
			>28000	0	0	>84000	15	3.3%	>84
			TOTAL	746		TOTAL	449		
SUMMARY T	OTALS								
но	T PARTICL	E EVENTS	138	:	SORTS BY	ONE GATE ONLY	68		
MU	LTIPARTIC	LE EVENTS	124			TWO GATES	68		
DI	STRIBUTED	EVENTS	313						

HOT PARTICLE EVENTS	138	SORTS BY ONE GATE ONLY	68
MULTIPARTICLE EVENTS	124	SORTS BY TWO GATES	68
DISTRIBUTED EVENTS	313		

#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 1 11-Feb-93								
AVERAGE BACKGROUND COUNT RATE		0.70	± 0.02	c/sec				
SORTER SOIL DENSITY			tons/m³					
GROUND SOIL DENSITY		1.65	tons/m³					
				CONTAM	INATED	CLEAN		
MASS TOTAL				3.22	tons	89.1	tons	
MAXIMUM/SORT				53.6	kg	53.6	kg	
MINIMUM/SORT				0.7	kg	40.8	kg	
WEIGHT RECOVERY OR VOLUME RECOVER	,							96.5%
EQUIVALENT SOIL-IN-GROUND				2.55	Aq <sub>2</sub>	70.6	yd3	73.2 yd3/day
The second secon	<b>7</b> 53							
PARTICLE ACTIVITY (MAXIMUM ESTIMA	IE)			51,709	kRa			
TOTAL				1,710	=			
MAXIMUM/SORT				-	kBq			
MINIMUM/SORT				2.4	KUY			
DISPERSED + PARTICLE (REALISTIC E	STIMATE) ACTIV	/ITY		22,699	kBq	11,593	kBq	
MAXIMUM/SORT				913	kBq	18	kBq	
MINIMUM/SORT				0	Bq	-9	kBq	
SPECIFIC ACTIVITY				7,057	Bq/kg	130	Bq/kg	
WORK HISTORY								
WORK DAY START	07:00 AM			WORK DA	AY END	05:30 PM		
PLANT START-UP	07:00 AM			PLANT S	SHUT-DOWN	05:06 PM		
START SOIL PROCESSING	07:31 AM			END SO	IL PROCESSING	05:05 PM		
LUNCH START	11:30 AM			LUNCH I	PER I OO	0.0	hr	
WORK HOURS					10.5 hr			
AVAILABLE HOURS					10.1 hr			
ACTUAL PROCESS HO	JRS (total 20-	sec re	ecords)		9.57 hr			
DOWN-TIME	(10101 11		•		0.53 hr			
TOTAL SYSTEM PAUS	E				0.52 hr			
NONAVAILABLE HOUR					0.4 hr			
START-UP					0.53 hr			
SHUT-DOWN					0.00 hr			
PLANT PERFORMANCE					94.8%			
PRODUCTIVITY					91.2%			
TOTAL SOIL PROCESSING RECORDS (2-	SEC and 20-SEC	:)			4,768			
NONPROCESS RECORDS (Test, calibra		•			3			
20-SEC PROCESS RECORDS	•			1,723				
TOTAL SORT				3	MD>0 & MND=0			
NO SORT					AD=0 & MD=0 &			
SOME SORT				1,323	AD>0&0 <md<mnd< td=""><td>max&amp;MND<m< td=""><td>NDmax</td><td></td></m<></td></md<mnd<>	max&MND <m< td=""><td>NDmax</td><td></td></m<>	NDmax	
UNEXPLAINED RECOR	os			0				
0 <ad<1kbq &="" md="">0</ad<1kbq>	0					UNEXPLAI	N I	PAUSE
AD=0 &	MD 0					TIME		TIME
AD<0 &	MD 0					None		07:00
ACT_P <5 kBq	890	29.27	4					

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2-	SEC COL	JNT PERIODS				17,230					
_	-	2-SEC RECORD	S WITH SO	ORTS	-	3,045	(ACT_P	>0 kBq)			
		2-SEC RECORD			IN >1 DE	-	_				
			DETECTOR		683		78.6%				
			DETECTO		151		17.4%				
			DETECTOR		28		3.2%				
		5	DETECTO	RS	7		0.8%				
			DETECTOR		0		0.0%				
			DETECTOR		1		0.1%				
		_	DETECTOR		1		0.1%				
			OTAL		-	869					
		NET 2-SEC RE	CORDS WIT	TH SORTS		2,176					
		2-SEC PERIOD				15,054					
		AVG TIME BET				15.8					
1-GATE SO	ORTS	1557	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)
1	43	2.8%	-14000	0	-261			4000	464	15.2%	4
2	138	8.9%	-12000	0	-224			8000	1232	40.5%	8
3	212	13.6%	-10000	1	-187			12000	479	15.7%	12
4	243	15.6%	-8000	2	-149			16000	247		16
5	310	19.9%	-6000	1	-112			20000	133		20
6	256	16.4%	-4000	6	-75			24000	99	3.3%	24
7	242	15.5%	-2000	22	-37			28000	60	2.0%	28
8	113	7.3%	0	62	0			32000	49	1.6%	32
TOTAL	1557	•	2000	123	37			36000	37	1.2%	36
			4000	243	75			40000	32	1.1%	40
2-GATE S	ORTS	1488	6000	320	112			44000	23	0.8%	44
DETECTR	SORTS	FREQ%	8000	301	149			48000	22	0.7%	48
8			10000	256	187			52000	13	0.4%	52
9	77	5.2%	12000	189	224			56000	12	0.4%	56
10	175	11.8%	14000	128	261			60000	17	0.6%	60
11	229	15.4%	16000	51	299			64000	10	0.3%	64
12	264	17.7%	18000	19	336			68000	12	0.4%	68
13	315	21.2%	20000	2	373			72000	7	0.2%	72
14	230	15.5%	22000	0	410			76000	3	0.1%	76
15	198	13.3%	24000	0	448			80000	9	0.3%	80
TOTAL	1488	1	26000	0	485			84000	5	0.2%	84
			>28000	0	0		2	84000	80	2.6%	>84
			TOTAL	1726				TOTAL	3045		
SUMMARY	TOTALS										
н	OT PART	ICLE EVENTS	2929		SORTS BY	ONE	EATE ON	.Y	1557		
H	ULTIPAR	TICLE EVENTS	1662		SORTS BY	r TWO G	ATES		1488		

#### REC CODE EXPLANATION

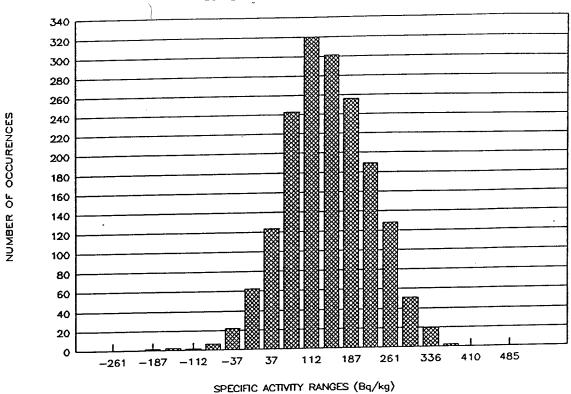
1.00 Source check (Soil on belt)

223

2.00 Empty belt

DISTRIBUTED EVENTS

SORTER 1 LOG DATA FOR 11-Feb-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 11-Feb-93

45% 40% 35% FREQUENCY OF OCCURENCE (%) 30% 25% 20% 15% 10% 5% 0% 68 76 52 20 28 12 ACTIVITY RANGES (kBq)

A-360

SORTER 2 11-Feb-93					
AVERAGE BACKGROUND COUNT RATE	•	0.80 ± 0	).02 c/sec		
SORTER SOIL DENSITY		1.15 tons/m³			
GROUND SOIL DENSITY		1.65 tons/m³			
			CONTAMINATED	CLEAN	
MASS TOTAL			8.28 tons	83.9 tons	
MAXIMUM/SORT			53.6 kg	53.6 kg	
MINIMUM/SORT			0.7 kg	41.5 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY	<b>,</b>				91.0%
EQUIVALENT SOIL-IN-GROUND			6.56 yd³	66.5 yd³	73.1 yd3/day
EMILANTENI 2015-14-240040			•		
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	(F)				
TOTAL TOTAL	· - •		92,906 kBq		
MAXIMUM/SORT			9,252 kBq		
MINIMUM/SORT			2.2 kBq		
HINITHON SON			•		
DISPERSED + PARTICLE (REALISTIC ES	STIMATE) ACTIV	'ITY	42,557 kBq	15,133 kBq	
MAXIMUM/SORT			6592 kBq	18 kBq	
MINIMUM/SORT			0 Bq	-9 kBq	
SPECIFIC ACTIVITY			5,142 Bq/kg	180 Bq/k	g
<b>6. 26.1.12</b> 1.00.1					
WORK HISTORY					
WORK DAY START	07:00 AM		WORK DAY END	05:30 PM	
PLANT START-UP	07:00 AM		PLANT SHUT-DOWN	05:06 PM	
START SOIL PROCESSING	07:31 AM		END SOIL PROCESSING	05:05 PM	
LUNCH START	11:30 AM		LUNCH PERIOD	0.0 hr	
LINEY HOUSE			10.5 hr		
WORK HOURS			10.1 hr		
AVAILABLE HOURS ACTUAL PROCESS HO	mo (4-4-1 70-		9.56 hr		
	JKS (total 20-	Sec records)	0.54 hr		
DOWN-TIME	_		0.52 hr		
TOTAL SYSTEM PAUSI			0.4 hr	•	
NONAVAILABLE HOURS	•		0.53 hr		
START-UP			0.01 hr		
SHUT-DOWN			94.7%		
PLANT PERFORMANCE PRODUCTIVITY			91.1%		
			5 773		
TOTAL SOIL PROCESSING RECORDS (2-		.,	5,372 5		
NONPROCESS RECORDS (Test, calibrat	tion, etc)		1,721		
20-SEC PROCESS RECORDS			81 MD>0 & MND=0		
TOTAL SORT			208 AD=0 & MD=0 8	D <gnm 3<="" td=""><td></td></gnm>	
NO SORT			1,432 AD>0&0<		
SOME SORT			1,432 ADZOGO PID PINI	A THE THE PARTY	
UNEXPLAINED RECORD			U	UNEXPLAIN	PAUSE
0 <ad<1kbq &="" md="">0</ad<1kbq>	2			TIME	TIME
AD=0 &				13:37:37	07:00
& 0>0A		24.2%		15:24:37	
ACT_P <5 kBq	<b>88</b> 5	£4.£*		.,	

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2-SEC COUNT PERIODS	17,2	
2-SEC RECORDS WITH SORTS	- 3,6	51 (ACT_P >0 kBq)
2-SEC RECORDS WITH POSITIV	/ES IN >1 DETECT	OR
2 DETECTORS	873	77.6%
3 DETECTORS	197	17.5%
4 DETECTORS	40	3.6%
5 DETECTORS	15	1.3%
6 DETECTORS	0	0.0%
7 DETECTORS	1	0.1%
8 DETECTORS	0	0.0%
TOTAL	11	25
NET 2-SEC RECORDS WITH SO	ers 2,5	26
2-SEC PERIODS WITH NO SOR		
		.6 sec
AVG TIME BETWEEN 2-SEC SO	(15	
400/ ACT NO MINE	ED SPEC A	ACT P

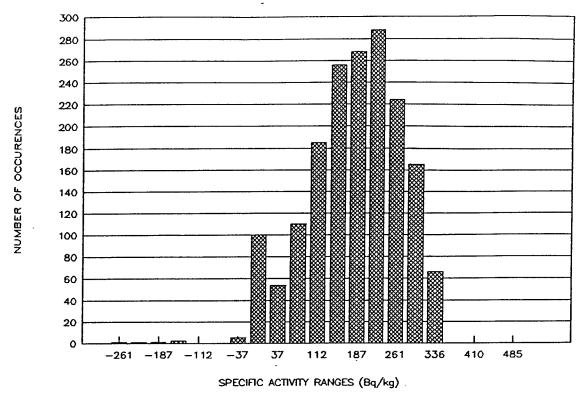
4 0475 6	DOTE	1894	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
1-GATE S	SORTS	FREQ%	(Bq)		(Bq/kg)	(Bq)	(#)		(kBq)
DETECTR	301(13	INCAN	(-4)	• •					
1	80	4.2%	-14000	1	-261	4000	377	10.3%	4
2	277	14.6%	-12000	1	-224	8000	1565	42.9%	8
3	335	17.7%	-10000	1	-187	12000	558	15.3%	12
4	309	16.3%	-8000	2	-149	16000	314	8.6%	16
5	312	16.5%	-6000	0	-112	20000	193	5.3%	20
6	313	16.5%	-4000	0	-75	24000	140	3.8%	24
7	213	11.2%	-2000	5	-37	28000	74	2.0%	28
8	55	2.9%	0	100	0	32000	61	1.7%	32
TOTAL	1894		2000	54	37	36000	47	1.3%	36
IOIAL	1074		4000	110	75	40000	29	0.8%	40
2-GATE S	OPTS	1757	6000	185	112	44000	30	0.8%	44
DETECTR	SORTS	FREQ%	8000	256	149	48000	27		48
8	CONTO		10000	268	187	52000	23		52
9	149	8.5%	12000	288	224	56000	25		56
10	255	14.5%	14000	224	261	60000	12		60
11	317	18.0%	16000	165	299	64000	11		64
12	322	18.3%	18000	66	336	68000	14		68
13	293	16.7%	20000	0	373	72000	9		72
14	270	15.4%	22000	0	410	76000	5		76
15	151	8.6%	24000	0	448	80000	9		80
TOTAL	1757		26000	0	485	84000	6		84
,			>28000	0	0	>84000	122		>84
			TOTAL	1726		TOTAL	3651		
SUMMARY	TOTALS								
		LE EVENTS	3487			ONE GATE ONLY	1894		
		CLE EVENTS	3016		SORTS BY	TWO GATES	1757		
D	ISTRIBUTE	D EVENTS	5863						

#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

2.00 Empty belt

SORTER 2 LOG DATA FOR 11-Feb-93



## JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 11-Feb-93

45% 40% 35% FREQUENCY OF OCCURENCE (%) 30% 25% 20% 15% 10% 5% 0% 76 84 12 20 28 52 60 68

ACTIVITY RANGES (kBq)

SORTER 1 10-Feb-93					
AVERAGE BACKGROUND COUNT RATE		0.71 ± 0	.04 c/sec		
SORTER SOIL DENSITY		1.15 tons/m³			
GROUND SOIL DENSITY		1.65 tons/m³			
GROOND SOLE DEMOTIO			CONTAMINATED	CLEAN	
MACC TOTAL			1.91 tons	79.2 tons	5
MASS TOTAL  MAXIMUM/SORT			11.4 kg	53.6 kg	
MINIMUM/SORT			0.7 kg	42.2 kg	
					97.6%
WEIGHT RECOVERY OR VOLUME RECOVERY			1.51 yd³	62.7 yd3	64.3 yd3/day
EQUIVALENT SOIL-IN-GROUND			1.51 /4	/-	
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	<b>)</b>				
TOTAL	· •		33,087 kBq		•
MAXIMUM/SORT			897 kBq	•	
MINIMUM/SORT			2.1 kBq		
statistical desire					
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTI	VITY	14,216 kBq	4,490 kBq	
MAXIMUM/SORT			574 kBq	16 kBq	
MINIMUM/SORT			0 Bq	-9 kBq	
SPECIFIC ACTIVITY			7,445 Bq/kg	57 Bq/1	Kg
WORK HISTORY			LINDY DAY END	05:30 PM	
WORK DAY START	07:00 AM		WORK DAY END PLANT SHUT-DOWN	05:30 PM	
PLANT START-UP	07:00 AM		END SOIL PROCESSING		
START SOIL PROCESSING	08:35 AM		LUNCH PERIOD	0.5 hr	
LUNCH START	11:30 AM		LONCH PERIOD		
WORK HOURS			10.0 hr		
AVAILABLE HOURS			10.0 hc		
ACTUAL PROCESS HOUR	s (total 20	-sec records)	8.41 hr		
DOWN-TIME	(0 (0000 -		1.59 hr		
TOTAL SYSTEM PAUSE			1.50 hr		
NONAVAILABLE HOURS			0.0 hr		
START-UP			1.59 hr		
SHUT-DOWN			0.51 hr		
. PLANT PERFORMANCE			84.1%		
PRODUCTIVITY			84.1%		
TOTAL COLL PROPERTIES RECORDS (2 CF	C and 20-cc	C)	3,560		
TOTAL SOIL PROCESSING RECORDS (2-SE NONPROCESS RECORDS (Test, calibration)		<b>-</b> ,	9		
NONPROCESS RECORDS (Test, Cattorati	ion, etc,		1,513		
ZU-SEC PROCESS RECORDS			0 MD>0 & MND=0		
NO SORT			718 AD=0 & MD=0 8	& MND>0	
SOME SORT			795 AD>0&0 <md<mn< td=""><td></td><td>x</td></md<mn<>		x
UNEXPLAINED RECORDS	:		0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	, 2			UNEXPLAIN	PAUSE
AD=0 & Pant State				TIME	TIME
AD<0 & 1				10:12:34	07:05
ACT P <5 kBq	565	27.6%		16:13:14	

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2	-SEC CO	OUNT PERIODS				15,130				
		2-SEC RECORD	S WITH S	CORTS		2,047	(ACT_P >0 kBq)			
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 D	ETECTOR				
		7	2 DETECTO	RS	502		79.8%			
		3	DETECTO	RS	105		16.7%			
		4	DETECTO	RS	16		2.5%			
		5	DETECTO	RS	6		1.0%			
		6	DETECTO	RS	0		0.0%			
		7	DETECTO	RS	0		0.0%			
		8	DETECTO	RS	0		0.0%			
		ī	OTAL			629				
		NET 2-SEC RE	CORDS WI	TH SORTS		1,418				
		2-SEC PERIOD	S WITH N	O SORTS		13,712				
		AVG TIME BET				21.3	sec			
. 1-GATE S	ORTS	1031	ACT_ND	NUMBER	SPEC_A		'ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)		(Bq/kg)		(Bq)	(#)		(kBq)
			•				•			•
1	19	1.8%	-14000	1	-261		4000	275	13.4%	4
2	101	9.8%	-12000	2	-224		8000	861	42.1%	8
3	151	14.6%	-10000	2	-187		12000	306	14.9%	12
4	162	15.7%	-8000	3	-149		16000	182	8.9%	16
5	186	18.0%	-6000	2	-112		20000	93	4.5%	20
6	194	18.8%	-4000	26	-75		24000	59	2.9%	24
7	166	16.1%	-2000	96	-37		28000	47	2.3%	28
8	52	5.0%	0	191	0		32000	31	1.5%	32
TOTAL	1031		2000	325	37		36000	23	1.1%	36
			4000	320	75		40000	20	1.0%	40
2-GATE SC	ORTS	1016	6000	251	112		44000	23	1.1%	44
DETECTR	SORTS	FREQ%	8000	146	149		48000	16	0.8%	48
8			10000	97	187		52000	13	0.6%	52
9	54	5.3%	12000	38	224		56000	13	0.6%	56
10	128	12.6%	14000	18	261		60000	5	0.2%	60
11	163	16.0%	16000	3	299		64000	8	0.4%	64
12	185	18.2%	18000	1	336		68000	10	0.5%	68
13	202	19.9%	20000	0	373		72000	5	0.2%	72
14	179	17.6%	22000	0	410		76000	2	0.1%	76
15	105	10.3%	24000	0	448		80000	6	0.3%	80
TOTAL	1016		26000	0	485		84000	3	0.1%	84
			>28000	0	0		>84000	46	2.2%	>84

SUMMARY TOTALS

HOT PARTICLE EVENTS 1948 SORTS BY ONE GATE ONLY 1031
MULTIPARTICLE EVENTS 905 SORTS BY TWO GATES 1016
DISTRIBUTED EVENTS 0

1522

#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

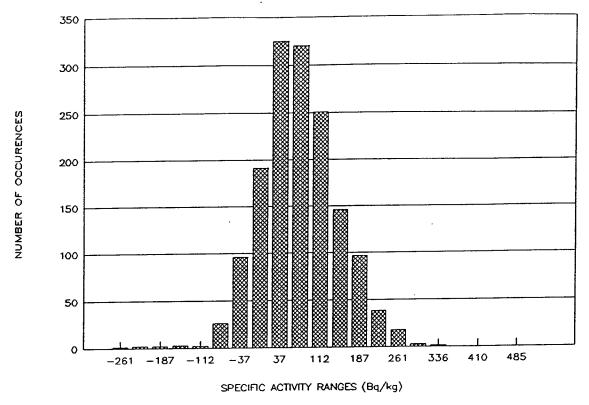
TOTAL

- 2.00 Empty belt
- 3.00 Test (No process soil)

TOTAL

2047

SORTER 1 LOG DATA FOR 10-Feb-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 10-Feb-93

45% 40% 35% FREQUENCY OF OCCURENCE (%) 30% 25% 20% 15% 10% 5% 0% 76 84 52 12 20 28

ACTIVITY RANGES (kBq)

A-366

SORTER 2 10-Feb-93				·
AVERAGE BACKGROUND COUNT RATE	0.79 ±	0.03 c/sec		
SORTER SOIL DENSITY	1.15 tons,	/m³		
GROUND SOIL DENSITY	1.65 tons,	/m³		
		CONTAMINATED	CLEAN	
MASS TOTAL		2.95 tons	78.1 tor	ns
MAXIMUM/SORT		53.6 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	38.2 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY		•		96.4%
EQUIVALENT SOIL-IN-GROUND		2.34 yd <sup>3</sup>	61.9 yd³	64.3 yd3/day
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)	1			
TOTAL		43,900 kBq		
MAX1MUM/SORT		2,463 kBq		
MINIMUM/SORT		2.7 kBq		
DISPERSED + PARTICLE (REALISTIC ESTI	MATE) ACTIVITY	19,474 kBq	8,996 kBq	
MAXIMUM/SORT		1288 kBq	18 kBq	
MINIMUM/SORT		0 Bq	-10 kBq	
SPECIFIC ACTIVITY		6,591 Bq/kg	115 Bq/	kg
WORK HISTORY				
WORK DAY START	07:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	07:00 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	08:35 AM	END SOIL PROCESSING	04:59 PM	
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr	
WORK HOURS		10.0 hr		
AVAILABLE HOURS		10.0 hr		
ACTUAL PROCESS HOURS	(total 20-sec records	) 8.41 hr		
DOWN-TIME		1.59 hr		
TOTAL SYSTEM PAUSE		1.50 հո		
NONAVAILABLE HOURS		0.0 hr		
START-UP		1.59 hr		
SHUT-DOWN		0.50 hr		
PLANT PERFORMANCE		84.1%		
PRODUCTIVITY		84.1%		
TOTAL SOIL PROCESSING RECORDS (2-SEC	and 20-SEC)	3,752		
NONPROCESS RECORDS (Test, calibration	n, etc)	9		
20-SEC PROCESS RECORDS		1,513		
TOTAL SORT		11 MD>0 & MND=0		
NO SORT		540 AD=0 & MD=0 &		
SOME SORT		962 AD>0&0 <md<mnd< td=""><td>max&amp;MND<mndmax< td=""><td>(</td></mndmax<></td></md<mnd<>	max&MND <mndmax< td=""><td>(</td></mndmax<>	(
UNEXPLAINED RECORDS		0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		UNEXPLAIN	PAUSE
AD=0 & MD	0		TIME	TIME
AD<0 & MD ACT P <5 kBq	0 516 23.0%		None	07:05
KCI_F \J KOY	J10 23.0%	•		

2-SEC COUNT PERIODS	15,13	30
2-SEC RECORDS WITH SORTS	2,2	39 (ACT_P >0 kBq)
2-SEC RECORDS WITH POSITIVES	IN >1 DETECTO	OR
2 DETECTORS	533	76.8%
3 DETECTORS	122	17.6%
4 DETECTORS	30	4.3%
5 DETECTORS	9	1.3%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL	69	94
NET 2-SEC RECORDS WITH SORTS	1,54	45
2-SEC PERIODS WITH NO SORTS	13,58	35
AVG TIME BETWEEN 2-SEC SORTS	19.	.6 sec

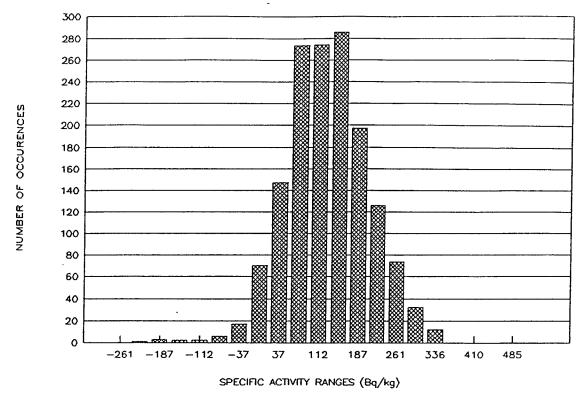
1-GATE	SORTS	1153	ACT_ND	NUMBER	SPEC_A	ACT_P		FREQ%	ACT_P
DETECTR		FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	58	5.0%	-14000	0	-261	4000	226	10.1%	4
2	171	14.8%	-12000	1	-224	8000	924	41.3%	8
3	206	17.9%	-10000	3	-187	12000	387	17.3%	12
4	213	18.5%	-8000	2	-149	16000	198	8.8%	16
5	196	17.0%	-6000	2		20000	118	5.3%	20
6	176	15.3%	-4000	6	-75	24000	71	3.2%	24
7	115	10.0%	-2000	17	-37	28000	45	2.0%	28
8	18	1.6%	0	70	0	32000	32	1.4%	32
TOTAL	1153	,,,,,,	2000	147	37	36000	33	1.5%	36
TOTAL	11,55		4000	273	75	40000	22	1.0%	40
2-GATE	SORTS	1086	6000	274	112	44000	21	0.9%	44
DETECTR		FREQ%	8000	286	149	48000	18	0.8%	48
8	00.110		10000	197	187	52000	16	0.7%	52
9	105	9.7%	12000	126	224	56000	13	0.6%	56
10	146	13.4%	14000	74	261	60000	9	0.4%	60
11	209	19.2%	16000	32	299	64000	10	0.4%	64
12	207	19.1%	18000	12	336	68000	5	0.2%	68
13	183	16.9%	20000	0	373	72000	6	0.3%	72
14	151	13.9%	22000	0	410	76000	5	0.2%	76
15	85	7.8%	24000	0	448	80000	1	0.0%	80
TOTAL	1086		26000	0	485	84000	8	0.4%	84
			>28000	0	0	>84000	71	3.2%	>84
			TOTAL	1522		TOTAL	2239		
SUMMARY	TOTALS								
	HOT PARTICE	E EVENTS	2125		SORTS BY	ONE GATE ONLY	1153		
	MULTIPARTIC		1523		SORTS BY	TWO GATES	1086		
	DISTRIBUTED		764						

#### REC CODE EXPLANATION

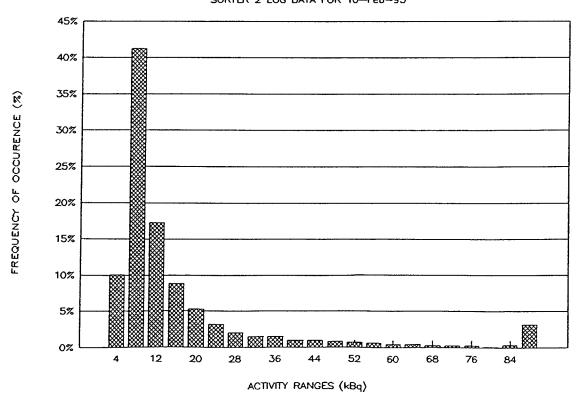
1.00 Source check (Soil on belt)

2.00 Empty belt

SORTER 2 LOG DATA FOR 10-Feb-93



## JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 10-Feb-93



SORTER 1 09-Feb-93				
SORTER				
AVERAGE BACKGROUND COUNT RATE		).04 c/sec		
SORTER SOIL DENSITY	1.15 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³	CONTAMINATED	CLEAN	
		0.00 tons	0.2 ton:	5
MASS TOTAL		0.7 kg	53.6 kg	
MAXIMUM/SORT		0.7 kg	52.9 kg	
MINIMUM/SORT		0.7 %9	•	
TOTAL OF HOLLING BECOVER	v			99.3%
WEIGHT RECOVERY OR VOLUME RECOVERY		0.00 yd³	0.2 yd³	0.2 yd3/day
EQUIVALENT SOIL-IN-GROUND		·		
PARTICLE ACTIVITY (MAXIMUM ESTIMA	TE)			
TOTAL	•	0 kBq		
MAXIMUM/SORT		ERR kBq		
MINIMUM/SORT		ERR k8q		
MINIMONY SOUT				
DISPERSED + PARTICLE (REALISTIC ES	STIMATE) ACTIVITY	4 k8q	18 kBq	
MAXIMUM/SORT		3 kBq	11 kBq	
MINIMUM/SORT		0 Bq	-2 kBq	
SPECIFIC ACTIVITY		2,854 Bq/kg	85 Bq/	(g
WORK HISTORY			0E 70 DW	
WORK DAY START	07:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	07:00 AM	PLANT SHUT-DOWN END SOIL PROCESSING	05:30 PM	
START SOIL PROCESSING	09:07 AM		0.5 hr	
LUNCH START	11:30 AM	LUNCH PERIOD	0.5	
		10.0 hr		
WORK HOURS		10.0 hr		
AVAILABLE HOURS	JRS (total 20-sec records)	0.02 hr		
	JK3 ((Utat 20 300 1000 00)	9.98 hr		
DOWN-TIME Total system pausi	=	9.68 hr		
NONAVAILABLE HOURS		0.0 hr		
START-UP		2.13 hr		
SHUT-DOWN		8.36 hr		
PLANT PERFORMANCE		0.2%		
PRODUCTIVITY		0.2%		
TOTAL SOIL PROCESSING RECORDS (2-	SEC and 20-SEC)	4		
NONPROCESS RECORDS (Test, calibrate	tion, etc)	4		
20-SEC PROCESS RECORDS		4		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		2 AD=0 & MD=0 8		,
SOME SORT		2 AD>0&0 <md<mnu< td=""><td>ліах&amp;тии&lt;тичііа)</td><td>`</td></md<mnu<>	ліах&тии<тичііа)	`
UNEXPLAINED RECORD		0	UNEXPLAIN	PAUSE
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		TIME	TIME
AD=0 &			None	07:06
& O>DA			110170	09:08
ACT_P <5 kBq	0 ERR			

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2-SEC COUNT PERIODS	40	
2-SEC RECORDS WITH SORTS	0	(ACT_P >0 kBq)
2-SEC RECORDS WITH POSITIVES IN >1	DETECTOR	
2 DETECTORS	0	ERR
3 DETECTORS	0	ERR
4 DETECTORS	0	ERR
5 DETECTORS	0	ERR
6 DETECTORS	0	ERR
7 DETECTORS	0	ERR
8 DETECTORS	0	ERR
TOTAL	0	
NET 2-SEC RECORDS WITH SORTS	0	
2-SEC PERIODS WITH NO SORTS	40	
AVG TIME BETWEEN 2-SEC SORTS	ERR	sec

1-GATE S	ORTS	0	ACT_ND	NUMBER	SPEC_A	ACT_P		FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	0	ERR	-14000	0	-261	4000	0	ERR	4
2	0	ERR	-12000	0	-224	8000	0	ERR	8
3	0	ERR	-10000	0	-187	12000	0	ERR	12
4	0	ERR	-8000	0	-149	16000	0	ERR	16
5	0	ERR	-6000	0	-112	20000	0	ERR	20
6	0	ERR	-4000	0	-75	24000	0	ERR	24
7	0	ERR	-2000	0	-37	28000	0	ERR	28
8	0	ERR	0	3	0	32000	0	ERR	32
TOTAL	0		2000	1	37	36000	0	ERR	36
			4000	1	75	40000	0	ERR	40
2-GATE S	ORTS	0	6000	0	112	44000	0	ERR	44
DETECTR	SORTS	FREQ%	8000	1	149	48000	0	ERR	48
8			10000	1	187	52000	0	ERR	52
9	0	ERR	12000	1	224	56000	0	ERR	56
10	0	ERR	14000	0	261	60000	0	ERR	60
11	0	ERR	16000	0	299	64000	0	ERR	64
12	0	ERR	18000	0	336	68000	0	ERR	68
13	0	ERR	20000	0	373	72000	0	ERR	72
14	0	ERR	22000	0	410	76000	0	ERR	76
15	. 0	ERR	24000	0	448	80000	0	ERR	80
TOTAL	0		26000	0	485	84000	0	ERR	84
			>28000	0	0	>84000	0	ERR	>84
			TOTAL	8		TOTAL	0		
SUMMARY	TOTALS								
		LE EVENTS	0		SORTS BY	ONE GATE ONLY	0		
241		CLE EVENTS	2		SORTS BY	TWO GATES	0		
٠	ISTRIBUTE		0						
_		· <del>-</del> ···-	-						

#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

2.00 Empty belt

SORTER 2 09-Feb-93	-								
TARKONOMIN COMBIT DATE		0.60	±	ERR c/sec					
AVERAGE BACKGROUND COUNT RATE			tons/m³						
SORTER SOIL DENSITY			tons/m³						
GROUND SOIL DENSITY			-	CONTAMINATED		CLEAN			
				0.06 tons		0.2	tons		
MASS TOTAL				53.6 kg		53.6	kg		
MAXIMUM/SORT				2.7 kg		50.9	kg		
MINIMUM/SORT									~~
WEIGHT RECOVERY OR VOLUME RECOVERY								79.0%	
EQUIVALENT SOIL-IN-GROUND				0.04 yd <sup>3</sup>		0.2	yd3	0.2 yd3/	'day
EGOLANCEM 2015 IN GROOMS									
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	)								
TOTAL				51 kBq					
MAXIMUM/SORT				31 kBq					
MINIMUM/SORT				7.9 kBq					
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTIV	ITY		42 kBq			kBq		
MAXIMUM/SORT				21 kBq			kBq		
MINIMUM/SORT				0 Bq			kBq		
SPECIFIC ACTIVITY				738 Bq/kg		45	Bq/kg		
WORK HISTORY						45 70 84			
WORK DAY START	07:00 AM			WORK DAY END		05:30 PM			
PLANT START-UP	07:00 AM			PLANT SHUT-DO		05:30 PM			
START SOIL PROCESSING	09:07 AM			END SOIL PROC	CESSING	09:08 AM			
LUNCH START	11:30 AM			LUNCH PERIOD		0.5	nr		
				40					
WORK HOURS					.0 hr				
AVAILABLE HOURS					.0 hr				
ACTUAL PROCESS HOUR	S (total 20-	sec r	ecords)		03 hr				
DOWN-TIME					97 hr				
TOTAL SYSTEM PAUSE					02 hr				
NONAVAILABLE HOURS					.0 hr				
START-UP					13 hr 35 hr				
SHUT-DOWN					.3%				
PLANT PERFORMANCE					.3%				
PRODUCTIVITY				•					
	C and 20-SEC	,			8				
TOTAL SOIL PROCESSING RECORDS (2-SE		,			2				
NONPROCESS RECORDS (Test, calibrati	on, etc)			5					
20-SEC PROCESS RECORDS				1 MD>0 8	MND=0				
TOTAL SORT				3 AD=0 8		MND>0			
NO SORT						)max&MND <mi< td=""><td>NDmax</td><td></td><td></td></mi<>	NDmax		
SOME SORT				0	_				
UNEXPLAINED RECORDS	0			-		UNEXPLAII	N	PAUSE	
0 <ad<1kbq &="" md="">0 AD=0 &amp; M</ad<1kbq>						TIME		TIME	
AD <0 × M						None		07:06	
	0	0.0	%						
ACT_P <5 kBq	•	3.0							

2-SEC COUNT PERIODS	50				
2-SEC RECORDS WITH SORTS	3	$(ACT_P > 0 kBq)$			
2-SEC RECORDS WITH POSITIVES	IN >1 DETECTOR				
2 DETECTORS	1	***			
3 DETECTORS	0	0.0%			
4 DETECTORS	0	0.0%			
5 DETECTORS	0	0.0%			
6 DETECTORS	0	0.0%			
7 DETECTORS	0	0.0%			
8 DETECTORS	0	0.0%			
TOTAL	1				
NET 2-SEC RECORDS WITH SORTS	2				
2-SEC PERIODS WITH NO SORTS	48				
AVG TIME BETWEEN 2-SEC SORTS	50.0	sec			

1-GATE	SORTS	1	ACT_ND	NUMBER	SPEC_A	ACT_P	SORŤ	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	0	0.0%	-14000	0	-261	4000	0	0.0%	4
2	0	0.0%	-12000	0	-224	8000	1	33.3%	8
3	0	0.0%	-10000	0	-187	12000	0	0.0%	12
4	1	100.0%	-8000	0	-149	16000	1	33.3%	16
5	0	0.0%	-6000	0	-112	20000	0	0.0%	20
6	0	0.0%	-4000	0	-75	24000	0	0.0%	24
7	0	0.0%	-2000	1	-37	28000	0	0.0%	28
8	0	0.0%	0	3	0	32000	1	33.3%	32
TOTAL	1		2000	0	37	36000	0	0.0%	36
			4000	1	75	40000	0	0.0%	40
2-GATE	SORTS	2	6000	0	112	44000	0	0.0%	44
DETECTR	SORTS	FREQ%	8000	0	149	48000	0	0.0%	48
8			10000	1	187	52000	0	0.0%	52
9	0	0.0%	12000	1	224	56000	0	0.0%	56
10	0	0.0%	14000	0	261	60000	0	0.0%	60
11	1	50.0%	16000	0	299	64000	0	0.0%	64
12	1	50.0%	18000	0	336	68000	0	0.0%	68
13	0	0.0%	20000	0	373	72000	0	0.0%	72
14	0	0.0%	22000	0	410	76000	0	0.0%	76
15	0	0.0%	24000	0	448	80000	0	0.0%	80
TOTAL	2		26000	0	485	84000	0	0.0%	84
			>28000	0	0	>84000	0	0.0%	>84
			TOTAL	7		TOTAL	3		
SUMMARY	TOTALS								
H	OT PARTIC	LE EVENTS	4		SORTS BY	ONE GATE ONLY	1		
P	ULTIPARTI	CLE EVENTS	0		SORTS BY	TWO GATES	2		
Đ	ISTRIBUTE	D EVENTS	80						

#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 1 08-Feb-93				
COUNT DATE	0.73 ±	0.05 c/sec		
AVERAGE BACKGROUND COUNT RATE	1.15 tons/m³			
SORTER SOIL DENSITY	1.65 tons/m <sup>3</sup>			
GROUND SOIL DENSITY	1.05 (01.07.11	CONTAMINATED	CLEAN	
		1.02 tons	86.8 tons	
MASS TOTAL		8.7 kg	53.6 kg	
MAXIMUM/SORT		0.7 kg	44.9 kg	
MINIMUM/SORT		••• ··· ··· ·· ·· ·		-Am
WEIGHT RECOVERY OR VOLUME RECOVER	1			98.8%
EQUIVALENT SOIL-IN-GROUND		0.81 yd³	68.8 yd³	69.6 yd³/day
PARTICLE ACTIVITY (MAXIMUM ESTIMA	(E)	21,688 kBq		
TOTAL		2,827 kBq		•
MAXIMUM/SORT		1.9 kBq		
MINIMUM/SORT		1.7 KBQ		
	ATTHATES ACTIVITY	8,670 kBq	2,901 kBq	
DISPERSED + PARTICLE (REALISTIC E	STIMATE) ACTIVITY	1784 kBq	15 kBq	
MAXIMUM/SORT		0 Bq	-12 kBq	
MINIMUM/SORT		8,504 Bq/kg	33 Bq/ks	3
SPECIFIC ACTIVITY		0,504 04 43	•	
WORK HISTORY				
WORK DAY START	07:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	07:00 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	07:39 AM	END SOIL PROCESSING		
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr	
		10.0 hr		
WORK HOURS		10.0 hr		
AVAILABLE HOURS		9.10 hr		
	JRS (total 20-sec records)	0.90 hr		
DOWN-TIME	_	0.61 hr		
TOTAL SYSTEM PAUS		0.0 hr		
NONAVAILABLE HOUR	S	0.65 hr		
START-UP		0.75 hr		
SHUT-DOWN		91.0%		
PLANT PERFORMANCE		91.0%		
PRODUCTIVITY		,,,,,,,		
TOTAL SOIL PROCESSING RECORDS (2-	SEC and 20-SEC)	2,606		
NONPROCESS RECORDS (Test, calibra		6		
20-SEC PROCESS RECORDS	•	1,638		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		970 AD=0 & MD=0		
SOME SORT		668 AD>0&0 <md<mni< td=""><td>Dmax&amp;MND</td><td></td></md<mni<>	Dmax&MND	
UNEXPLAINED RECOR	os	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		UNEXPLAIN	PAUSE
AD=0 &	MD 0		TIME	TIME
AD<0 &	_		None	07:02
ACT_P <5 kBq	283 29.2%			

16,380

2	2-SEC COUNT PERIODS				16,380					
		2-SEC RECORD	S WITH S	ORTS		968	(ACT_P >0	kBq)		
	;	2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	ETECTOR				
		2	DETECTO	RS	210		81.7%			
		3	DETECTO	RS	39		15.2%			
		4	DETECTO	RS	5		1.9%			
		5	DETECTO	RS	3		1.2%			
		6	DETECTO	RS	0		0.0%			
		7	DETECTO	RS	0		0.0%			
		8	DETECTO	RS	0		0.0%			
		Т	OTAL			257				
		NET 2-SEC RE	CORDS WI	TH SORTS		711				
	:	2-SEC PERIOD	S WITH N	O SORTS		15,669				
	1	AVG TIME BET	WEEN 2-S	EC SORTS		46.1	sec			
			•							
1-GATE S	ORTS	480	ACT_ND	NUMBER	SPEC_A		ACT_I		FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(Bq)	) (#)		(kBq)
	40	2 44	1/000	•	2/1		4000	130	13.4%	4
1	10	2.1%	-14000	0	-261				41.6%	8
2	38	7.9%	-12000	0	-224		8000		16.0%	12
3	77	16.0%	-10000	2	-187		12000			
4	74	15.4%	-8000	8	-149		16000			16
5	83	17.3%	-6000	18	-112		20000		4.3%	20
6	88	18.3%	-4000	56	-75		24000		2.6%	24
7	77	16.0%	-2000	138	-37		28000		2.0%	28
8	33	6.9%	0	288	0		32000		1.5%	32
TOTAL	480		2000	376	37		36000		1.5%	36
			4000	353	75		40000	) 14	1.4%	40
2-GATE SO	ORTS	488	6000	227	112		44000	9	0.9%	44
DETECTR	SORTS	FREQ%	8000	108	149		48000	) 7	0.7%	48
. 8			10000	45	187		52000	7	0.7%	52
9	25	5.1%	12000	14	224		56000	8 (	0.8%	56
10	63	12.9%	14000	10	261		60000	7	0.7%	60
11	91	18.6%	16000	1	299		64000	7	0.7%	64
12	82	16.8%	18000	0	336		68000	0	0.0%	68
13	95	19.5%	20000	0	373		72000	5	0.5%	72
14	81	16.6%	22000	0	410		76000	3	0.3%	76
15	51	10.5%	24000	0	448		80000	2	0.2%	80
TOTAL	488		26000	0	485		84000	0	0.0%	84
			>28000	0	0		>84000	28	2.9%	>84
			TOTAL	1644			TOTAL	968		
SUMMARY 1	OTALS									
нс	T PARTIC	LE EVENTS	979		SORTS BY	ONE GA	TE ONLY	480		
MU	ILTIPARTI	CLE EVENTS	545		SORTS BY	TWO GA	TES	488		
DI	STRIBUTE	D EVENTS	0							

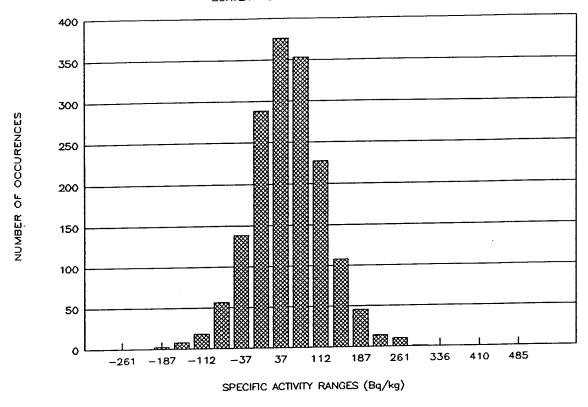
#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

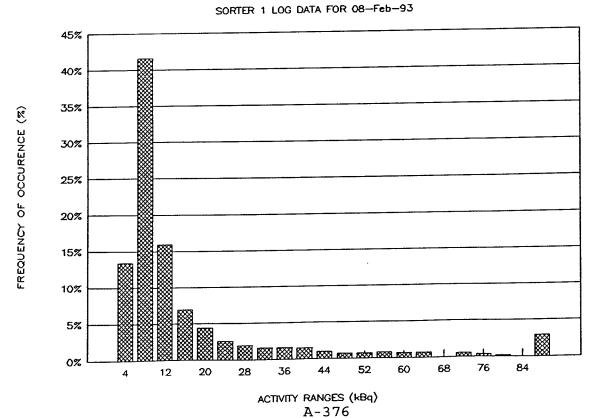
2.00 Empty belt

2-SEC COUNT PERIODS

SORTER 1 LOG DATA FOR 08-Feb-93



## JA SOIL CLEANUP PLANT HOT PARTICLES



AVERAGE BACKGONDO COUNT RATE   1.15   tons/m²   COUNT ROTE   1.15   tons/m²   COUNT ROTE   CONTAMINATED   CLEAN   CLEAN   CONTAMINATED   CLEAN   CL	SORTER 2 08-Feb-93				
SORTER SOIL DENSITY   1.15 tons/m²   1.65 tons/m²   1.65 tons/m²   1.65 tons/m²   1.65 tons/m²   1.65 tons/m²   1.45 tons   86.0 tons	AVERAGE RACKGROUND COUNT RATE	0.80 ± 0	.02 c/sec		
CONTAMINATED   CLEAN   CONTAMINATED   CLEAN		1.15 tons/m³			
CONTAMINATED   CEAN		1.65 tons/m³			
MAXIMUM/SORT   53.6 kg   53.6 kg   47.5 kg   78.3 kg   47.5 kg	ground Soil Sensiti		CONTAMINATED	CLEAN	
MAXIMAM/SORT   53.6 kg   53.6 kg   77.5 kg   77.5 kg   78.3 kg   7	MACS TOTAL		1.45 tons	<b>86.0</b> tons	
MINIMUM/SORT 0.7 kg 4.7.5 kg 98.3%  MEIGHT RECOVERY OR VOLUME RECOVERY EQUIVALENT SOIL-IN-GROUND 1.15 yd³ 68.2 yd³ 69.3 yd³/day  PARTICLE ACTIVITY (MAXIMUM ESTIMATE)  TOTAL 18,619 kBq  MAXIMUM/SORT 504 kBq  MAXIMUM/SORT 2.6 kBq  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY 8,864 kBq 6,310 kBq  MAXIMUM/SORT 2.6 kBq  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY 8,864 kBq 6,310 kBq  MAXIMUM/SORT 2.6 kBq  MORK DAY START 0.7:00 AM WORK DAY END 05:30 PM  START SOIL PROCESSING 07:39 AM END 501:30 PM  START SOIL PROCESSING 07:39 AM END 501: PROCESSING 04:42 PM  LUNCH START 11:30 AM LUNCH PERIOD 0.55 hr  MORK HOURS 11:30 AM LUNCH PERIOD 0.55 hr  DOM-TIME 0.93 hr  DOM-TIME 0.93 hr  DOM-TIME 0.93 hr  DOM-TIME 0.95 hr  PLANT STERT-UP 0.65 hr  DOM-TIME 0.065 hr  START-UP 0.65 hr  PLANT STERT-UP 0.65 hr  DOM-TIME 0.97 hr  PLANT STERT PAUSE 0.06 hr  ROWAWAILABLE HOURS 0.07 hr  DOM-TIME 0.97 hr  PLANT STERT-UP 0.65 hr  START-UP 0.65 hr  START-UP 0.65 hr  PLANT STERT-UP 0.65 hr  START-UP 0.65 hr  START-UP 0.65 hr  START-UP 0.65 hr  START-UP 0.65 hr  DOM-TIME 0.90 hr  PLANT STERT PAUSE 0.06 hr  ROWAWAILABLE HOURS 0.07 hr  PLANT STERT-UP 0.65 hr  START-UP 0.65 hr  START-	· · · ·		53.6 kg	53.6 kg	
MORK HISTORY			0.7 kg	47.5 kg	
Total	name of the second				
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)	WEIGHT RECOVERY OR VOLUME RECOVERY				98.3%
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)  TOTAL  MAXIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  MORK DAY START  MORK DAY END  MORK			1.15 yd³	68.2 yd³	69.3 yd3/day
TOTAL  MAXIMUM/SORT  HINIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  A8,864 kBq  AXIMUM/SORT  HINIMUM/SORT  HOX MAXIMUM/SORT  HINIMUM/SORT  HOX BQ  AXIMUM/SORT  HOX BQ  BQ  PERSON  BQ  PERSON  HORK HISTORY  WORK DAY START  O7:00 AM  PLANT SHATT-UP  PLANT START-UP  FOR AM  START SOIL PROCESSING  O7:39 AM  LUNCH PERIOD  MORK HOURS  AVAILABLE HOURS  ACTUAL PROCESS HOURS (total 20-sec records)  DONN-TIME  TOTAL SYSTEM PAUSE  MORK VOURS  ACTUAL PROCESS HOURS (total 20-sec records)  DONN-TIME  TOTAL SYSTEM PAUSE  MONAVAILABLE HOURS  START-UP  START-UP  O.65 hr  START-UP  O.65 hr  START-UP  O.65 hr  START-UP  O.65 hr  START-UP  O.79 hr  PLANT PERFORMANCE  PRODUCTIVITY  PO.7X  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  20-SEC PROCESS RECORDS (Test, calibration, etc)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  TOTAL SORT  NO SORT  TOTAL SORT  OCAD-188 & MD-0 & MND-0  TIME  TIME  TIME  TIME  TIME  TIME  TIME					
MAXIMUM/SORT   504 kBq   2.6 kBq	PARTICLE ACTIVITY (MAXIMUM ESTIMATE)				
MAXIMUM/SORT  MINIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  AXXIMUM/SORT  MAXIMUM/SORT  MAXIMUM/SORT  MAXIMUM/SORT  SPECIFIC ACTIVITY  WORK DAY START  07:00 AM  PLANT START-UP  WORK DAY START  10:00 Bq  PLANT START-UP  START SOIL PROCESSING  07:39 AM  END SOIL PROCESSING  AVAILABLE HOURS  AVAILABLE HOURS  AVAILABLE HOURS  ACTUAL PROCESS HOURS (total 20-sec records)  DOM-TIME  TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SWIT-OUMN  PLANT START-UP  0.65 hr  SWIT-OUNN  DOM-TIME  TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SWIT-OUNN  DOM-TY  PLANT PERFORMANCE  PRODUCTIVITY  90.7%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (1est, calibration, etc)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (1est, calibration, etc)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (1est, calibration, etc)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESSING REC			18,619 kBq		
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  B, 8,654 kBq 6,310 kBq MAXIMAM/SORT 420 kBq 18 kBq 19 kBq 19 kBq 19 kBq 19 kBq 19 kBq 10	•		504 kBq		
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  MAXIMUM/SORT  SPECIFIC ACTIVITY  WORK MISTORY  WORK DAY START  O7:00 AM  PLANT START-UP  START SOIL PROCESS HOURS  AVAILABLE HOURS  AVAILABLE HOURS  ACTUAL PROCESS HOURS (total 20-sec records)  DOWN-TIME  TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  START-UP  START-UP  O6:00 AM  PLANT START-UP  O7:00 AM  DOWN-TIME  O7:00 AM  O7:00 AM  O7:00 AM  DOWN-TIME  O7:00 AM  O7:00 AM  O7:00 AM  O7:00 AM  O7:00 AM  DOWN-TIME  O7:00 AM  O7:00			2.6 kBq		
MAXIMUM/SORT	•				
MAXIMUM/SORT HINIMUM/SORT SPECIFIC ACTIVITY  MORK PAYSTART PLANT START PLANT SOIL PROCESSING O7:39 AM END SOIL PROCESSING O7:39 AM END SOIL PROCESSING O4:42 PM LUNCH START PLANT START PLANT SOIL PROCESSING O7:39 AM LUNCH PERIOD O.5 hr  MORK HOURS AVAILABLE HOURS ACTUAL PROCESS HOURS (total 20-sec records) P.07 hr DOWN-TIME TOTAL SYSTEM PAUSE NONAWAILABLE HOURS START-UP O.65 hr SHUT-DOWN PLANT PERFORMANCE PRODUCTIVITY PO.77X PO.77X  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) PROPERS RECORDS TOTAL SOIT OSEC PROCESS RECORDS TOTAL SORT NO SORT SOME SORT UNEXPLAINED RECORDS 1 SOME SORT UNEXPLAINED RECORDS 1 UNEXPLAINED PAUSE UNEXPLAIN PAUSE TIME TIME TIME TIME TIME TIME TIME TIM	DISPERSED + PARTICLE (REALISTIC ESTIMATE	ACTIVITY	8,864 kBq	6,310 kBq	
MINIMUM/SORT SPECIFIC ACTIVITY  WORK HISTORY  WORK DAY START  PLANT START-UP  WORK DAY START  MORK HOURS  AVAILABLE HOURS  ACTUAL PROCESS HOURS (total 20-sec records)  DOINN-THHE  TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOWN  DOIN THHE  10.0 hr  10.			420 kBq	18 kBq	
SPECIFIC ACTIVITY   6,108 Bq/kg   73 Bq/kg			0 Bq	-9 kBq	
WORK DAY START   07:00 AM			6,108 Bq/kg	73 Bq/ks	g
WORK DAY START   07:00 AM					
PLANT START-UP 07:00 AM PLANT SHUT-DOWN 05:30 PM START SOIL PROCESSING 07:39 AM END SOIL PROCESSING 04:42 PM LUNCH START 11:30 AM LUNCH PERIOD 0.5 hr    WORK HOURS	WORK HISTORY				
PLANT START-UP 07:00 AM PLANT SHUT-DOWN 05:30 PM START SOIL PROCESSING 07:39 AM END SOIL PROCESSING 04:42 PM LUNCH START 11:30 AM LUNCH PERIOD 0.5 hr  WORK HOURS 10:00 hr AVAILABLE HOURS 10:00 hr AVAILABLE HOURS 10:00 hr DOWN-TIME 0.93 hr DOWN-TIME 0.93 hr DOWN-TIME 0.93 hr DOWN-TIME 0.93 hr DOWN-TIME 0.61 hr DOWN-TIME 0.65 hr START-UP 0.65 hr SHUT-DOWN 0.79 hr PLANT PERFORMANCE 90.7% PRODUCTIVITY 90.7% PRODUCTIVITY 90.7%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,605  NONPROCESS RECORDS 11,632  TOTAL SORT 3 MD>0 & MND=0  NONPROCESS RECORDS 1,632  TOTAL SORT 3 MD>0 & MND=0  NONPROCESS RECORDS 1  SOME SORT 771 AD=0 & MD=0 & MND>0  O <ad<1 &="" kg="" md="">0 1  UNEXPLAIN PAUSE 1 IME TIME 1 IME 1</ad<1>	WORK DAY START 07:0	MA 00	WORK DAY END	05:30 PM	
START SOIL PROCESSING   07:39 AM		MA 00	PLANT SHUT-DOWN	05:30 PM	
LUNCH START   11:30 AM   LUNCH PERIOD   0.5 hr		9 AM	END SOIL PROCESSING	04:42 PM	
AVAILABLE HOURS  AVAILABLE HOURS  ACTUAL PROCESS HOURS (total 20-sec records)  DOWN-TIME  10TAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY  DOWN-TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  20-SEC PROCESS RECORDS  1,632  TOTAL SORT  NO SORT  SOME SORT  SOME SORT  UNEXPLAINED RECORDS  1  UNEXPLAINED RECORDS  1  UNEXPLAIN PAUSE  AD=0 & MD > 0  TIME  TOTAL SORT  TOTAL SORT  AD=0 & MD > 0  TIME  TIME  TIME  TIME  TOTAL SORT  TOTAL SORT  AD=0 & MD > 0  TIME  TIME  TIME  TIME  TOTAL SORT  TIME  TOTAL SORT  TOTAL SORT  AD=0 & MD > 0  TIME  TOTAL SORT  TOTAL SORT  AD=0 & MD > 0  TIME  TIME  TIME  TIME  TOTAL SORT  TOTAL SORT  TOTAL SORT  AD=0 & MD > 0  TIME  TIME  TIME  TOTAL SORT  TOTAL SORT  TOTAL SORT  AD=0 & MD > 0  TIME  TIME  TOTAL SORT  TOTAL SORT  TOTAL SORT  TOTAL SORT  AD=0 & MD > 0  TIME  TIME  TOTAL SORT  TOTA		0 AM	LUNCH PERIOD	0.5 hr	
AVAILABLE HOURS  AVAILABLE HOURS  ACTUAL PROCESS HOURS (total 20-sec records)  DOWN-TIME  10TAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY  DOWN-TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  20-SEC PROCESS RECORDS  1,632  TOTAL SORT  NO SORT  SOME SORT  SOME SORT  UNEXPLAINED RECORDS  1  UNEXPLAINED RECORDS  1  UNEXPLAIN PAUSE  AD=0 & MD > 0  TIME  T					
ACTUAL PROCESS HOURS (total 20-sec records)  DOMN-TIME  DOMN-TIME  TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY  DOLORS  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  2,605  NONPROCESS RECORDS  TOTAL SORT  NO SORT  SOHE SORT  UNEXPLAINED RECORDS  1  AD=0 & MD  TIME  TIME  TIME  TIME  O.93 hr  O.93 hr  O.93 hr  O.94 hr  O.95 hr  O.65 hr  O.79 hr  O.70 hr  O.70 hr  O.93 hr  O.93 hr  O.94 hr  O.95 hr  O.90 hr  O.90 hr  O.90 hr  O.90 hr  O.90 hr  O.90 hr  O.91 hr  O.93 hr  O.93 hr  O.90 hr	WORK HOURS		10.0 hr		
DOWN-TIME  DOWN-TIME  TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY  DOI-79 hr  90.7%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  2,605  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  1  O-AD-1kBq & MD>0  1  UNEXPLAIN PAUSE  AD=0 & MD  TIME  TIME  TIME  TIME  TIME	AVAILABLE HOURS		10.0 hr		
TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  2,605  NONPROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  1  TIME  TIME  TIME  AD=0 & MD 1  TIME  TIME  TIME  TIME  TIME  O.61 hr  0.61 hr  0.62 hr  0.65 hr  0.77 hr  90.7%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  2,605  12  2,605  12  1,632  TOTAL SORT  3 MD>0 & MND=0  771 AD=0 & MD=0 & MND>0  857 AD>0& MND=0  UNEXPLAIN PAUSE  TIME  TIME	ACTUAL PROCESS HOURS (to	tal 20-sec records)	9.07 hr		
NONAVAILABLE HOURS   0.0 hr	DOWN-TIME		0.93 hr	•	
START-UP  SHUT-DOWN  SHUT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY  90.7%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  SOME SORT  UNEXPLAINED RECORDS  1  UNEXPLAIN PAUSE  AD=0 & MD 1  TIME  TIME  TIME  TIME  O.65 hr  0.779 hr  0.779 hr  0.779 hr  0.770 hr  0.779	TOTAL SYSTEM PAUSE		0.61 hr		
SHUT-DOWN PLANT PERFORMANCE PRODUCTIVITY 90.7%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) NONPROCESS RECORDS (Test, calibration, etc) 20-SEC PROCESS RECORDS 1,632 TOTAL SORT NO SORT NO SORT SOME SORT UNEXPLAINED RECORDS 1 AD=0 & MD>0 1 UNEXPLAIN PAUSE AD=0 & MD 1  TIME TIME TIME	NONAVAILABLE HOURS		0.0 hr		
PLANT PERFORMANCE PRODUCTIVITY 90.7%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,605  NONPROCESS RECORDS (Test, calibration, etc) 20-SEC PROCESS RECORDS 1,632  TOTAL SORT 3 MD>0 & MND=0  NO SORT 771 AD=0 & MD=0 & MND>0  SOME SORT 0 <ad<ad<amd &="" 1="" amd="" md="" mindmax="" mindmax&mand<="" o<ad<1kbq="" records="" unexplained="">0 1  UNEXPLAIN PAUSE AD=0 &amp; MD 1  TIME TIME  TIME  O TOTAL SOIL PROCESSING RECORDS 1  UNEXPLAIN PAUSE TIME TIME</ad<ad<amd>	START-UP		0.65 hr		
PRODUCTIVITY  90.7%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  1,632  10TAL SORT  NO SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  1  0 <ad<1kbq &="" md="">0  1  UNEXPLAIN PAUSE  AD=0 &amp; MD  1  TIME  TIME  TIME</ad<1kbq>	SHUT-DOWN		0.79 hr		
TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  1,632  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  1  0 <ad<1kbq &="" md="">0  1  UNEXPLAIN PAUSE  AD=0 &amp; MD  1  UNEXPLAIN PAUSE  TIME  TIME  TIME</ad<1kbq>	PLANT PERFORMANCE		90.7%		
12   20-SEC PROCESS RECORDS   1,632	PRODUCTIVITY		90.7%		
12   20-SEC PROCESS RECORDS   1,632					
1,632   1,632   3 MD>0 & MND=0   3 MD>0 & MND=0   1 MD=0 & MND=0 & M	TOTAL SOIL PROCESSING RECORDS (2-SEC and	20-SEC)	2,605		
TOTAL SORT  NO SORT  TOTAL SORT  NO SORT  TOTAL SORT	NONPROCESS RECORDS (Test, calibration, e	tc)	12		
NO SORT 771 AD=0 & MD=0 & MND>0  SOME SORT 857 AD>0&0 <md<mndmax&mnd<mndmax &="" 0<ad<1kbq="" 1="" md="" records="" unexplained="">0 1  AD=0 &amp; MD 1  TIME TIME</md<mndmax&mnd<mndmax>			-		
SOME SORT  UNEXPLAINED RECORDS  O <ad<1kbq &="" md="">0  1  UNEXPLAIN PAUSE  AD=0 &amp; MD  1  TIME  TIME  TIME</ad<1kbq>	TOTAL SORT		- · · · · · · · · · · · · · · · · · · ·		
UNEXPLAINED RECORDS  0 < AD < 1 kBq & MD > 0	NO SORT				
0 <ad<1kbq &="" md="">0 1 UNEXPLAIN PAUSE  AD=0 &amp; MD 1 TIME TIME</ad<1kbq>	SOME SORT		857 AD>0&0 <md<mni< td=""><td>xemONM&gt;GNM&amp;xem(</td><td></td></md<mni<>	xemONM>GNM&xem(	
AD=0 & MD 1 TIME TIME	UNEXPLAINED RECORDS		1		
07-07	•	1			
AD<0 & MD 0 08:25:48 07:02	AD=0 & MD	1			
	AD<0 & MD	0			07:02
ACT_P <5 kBq 222 22.8% 12:29:08	ACT_P <5 kBq	222 22.8%		12:29:08	

16,320

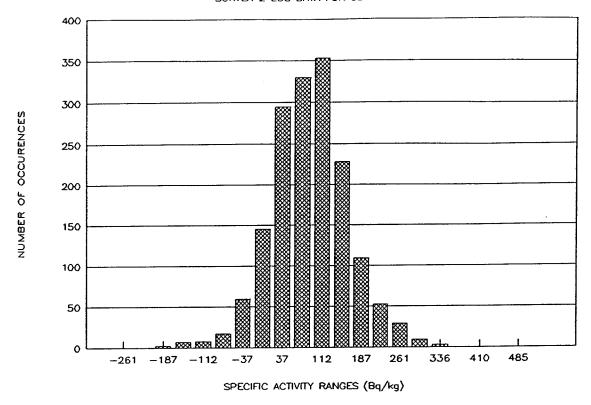
2-	2-SEC COUNT PERIODS			-	16,320						
	2-	SEC RECORDS	S WITH SC	ORTS			(ACT_P	>0 kBq)			
	2-	SEC RECORDS	S WITH PO	SITIVES	IN >1 DE	TECTOR					
		2	DETECTOR	RS .	222		84.4%				
		3	DETECTOR	RS	38		14.4%				
		4	DETECTOR	RS	2		0.8%				
		5	DETECTOR	RS	1		0.4%				
		6	DETECTOR	RS	0		0.0%				
		7	DETECTOR	RS	0		0.0%				
		8	DETECTOR	RS	0		0.0%				
		To	OTAL			263					
NET 2-SEC RECORDS WITH SORTS				710							
		SEC PERIOD				15,610					
		G TIME BET				46.0	sec				
	•										
1-GATE SO	פדפר	494	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	_ (Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)
DETECTA	555		-								
1	20	4.0%	-14000	0	-261			4000	99	10.2%	4
2	93	18.8%	-12000	0	-224			8000	406	41.7%	8
3	80	16.2%	-10000	2	-187			12000	164	16.9%	12
4	85	17.2%	-8000	7	-149			16000	89	9.1%	16
5	81	16.4%	-6000	8	-112			20000	42	4.3%	20
6	75	15.2%	-4000	17	-75			24000	23	2.4%	24
7	49	9.9%	-2000	59	-37			28000	27	2.8%	28
8	11	2.2%	0	145	0			32000	14	1.4%	32
TOTAL	494		2000	294	37			36000	7	0.7%	36
			4000	329	75			40000	11	1.1%	40
2-GATE S	ORTS	479	6000	353	112			44000	5	0.5%	44
DETECTR	SORTS	FREQ%	8000	228	149			48000	7	0.7%	48
8			10000	109	187			52000	8	0.8%	52
9	43	9.0%	12000	52	224			56000	9	0.9%	56
10	85	17.7%	14000	29	261			60000	5	0.5%	60
11	82	17.1%	16000	9	299			64000	3	0.3%	64
12	90	18.8%	18000	3	336			68000	4	0.4%	68
13	86	18.0%	20000	0	373			72000	5	0.5%	72
14	60	12.5%	22000	0	410			76000	1	0.1%	76
15	33	6.9%	24000	0	448			80000	2	0.2%	80
TOTAL	479		26000	0	485			84000	4		84
			>28000	0	0		2	84000	38	3.9%	>84
			TOTAL	1644				TOTAL	973		
SUMMARY	TOTALS										
H	OT PARTIC	LE EVENTS	966		SORTS BY			_Y	494		
		CLE EVENTS	970		SORTS BY	TWO G	ATES		479		
	ISTRIBUTE		227								

#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt

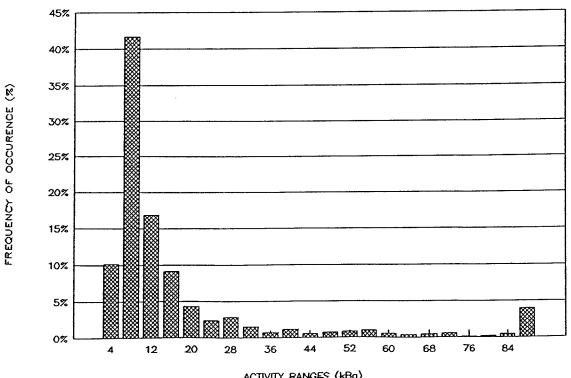
2-SEC COUNT PERIODS

SORTER 2 LOG DATA FOR 08-Feb-93



## JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 08-Feb-93



ACTIVITY RANGES (kBq)

A-379

SORTER 1 26-Jan-93		-		
AVERAGE BACKGROUND COUNT RATE	0.72 ± 0.0	04 c/sec		
SORTER SOIL DENSITY	1.15 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³			
GROOMD SOLE DEWALL.		CONTAMINATED	CLEAN	
MASS TOTAL		1.04 tons	87.3 ton:	5
MAXIMUM/SORT		8 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	45.5 kg	
MINIMUM SON!				
WEIGHT RECOVERY OR VOLUME RECOVERY				98.8%
EQUIVALENT SOIL-IN-GROUND		0.83 yd³	69.2 yd <sup>3</sup>	70.0 yd3/day
Edol Merini Good S				
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	:)			
TOTAL		16,003 kBq		•
MAXIMUM/SORT		443 kBq		
MINIMUM/SORT		2.2 kBq		
			7 500 k0a	
DISPERSED + PARTICLE (REALISTIC EST	TIMATE) ACTIVITY	6,931 kBq	3,588 kBq 14 kBq	
MAXIMUM/SORT		339 kBq	-12 kBq	
MINIMUM/SORT		0 Bq	-12 KBQ/	
SPECIFIC ACTIVITY		6,647 Bq/kg	4 ( BQ/	kg .
WORK HISTORY		ALADY DAY SUB	05:30 PM	
WORK DAY START	07:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	07:00 AM	PLANT SHUT-DOWN		
START SOIL PROCESSING	07:59 AM	END SOIL PROCESSING	0.0 hr	
LUNCH START	12:00 AM. N/A	LUNCH PERIOD	<b>0.0</b>	
		10.5 hr		
WORK HOURS		10.5 hr		
AVAILABLE HOURS		9.16 hr		
	RS (total 20-sec records)	1.34 hr		
DOWN-TIME		0.55 hr		
TOTAL SYSTEM PAUSE		0.0 hr		
NONAVAILABLE HOURS		0.99 hr		
START-UP		0.35 hr		
SHUT-DOWN		87.2%		
PLANT PERFORMANCE		87.2%		
PRODUCTIVITY		0.00.		
	504 30-55C)	2,682		
TOTAL SOIL PROCESSING RECORDS (2-SI		3		
NONPROCESS RECORDS (Test, calibrat	ion, etc)	1,649		
20-SEC PROCESS RECORDS		0 MD>0 & MND=0		
TOTAL SORT		949 AD=0 & MD=0	MND>0	
NO SORT		700 AD>0&0 <md<mni< td=""><td></td><td>x</td></md<mni<>		x
SOME SORT	•	0		
UNEXPLAINED RECORDS	2	-	UNEXPLAIN	PAUSE
0 <ad<1kbq &="" md="">0</ad<1kbq>	_		TIME	TIME
AD=0 & 1	_		10:23:39	07:26
AD<0 & 1	₩D 0 326 31.6%		15:47:39	
ACT_P <5 kBq	320 31.0%			

2-SEC COUNT PERIODS	16,49	90
2-SEC RECORDS WITH SORTS	1,03	3 (ACT_P >0 kBq)
2-SEC RECORDS WITH POSITIVES	IN >1 DETECTO	)R
2 DETECTORS	230	83.0%
3 DETECTORS	39	14.1%
4 DETECTORS	8	2.9%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL	27	7
NET 2-SEC RECORDS WITH SORTS	75	6
2-SEC PERIODS WITH NO SORTS	15,73	4
AVG TIME BETWEEN 2-SEC SORTS	43.	6 sec

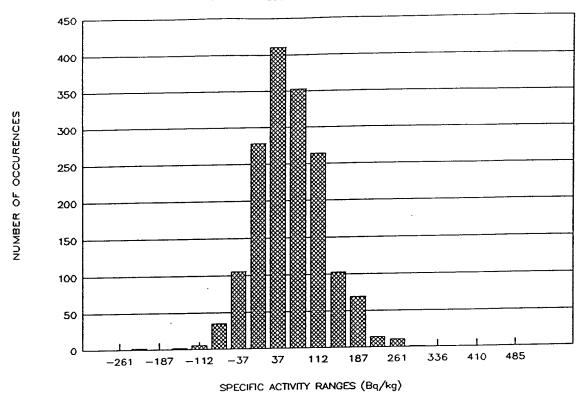
1-GATE	SORTS	527	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECT	R SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	12	2.3%	-14000	0	-261	4000	150	14.5%	4
2	57	10.8%	-12000	2	-224	8000	434	42.0%	8
3	87	16.5%	-10000	0	-187	12000	162	15.7%	12
4	93	17.6%	-8000	2	-149	16000	81	7.8%	16
5	101	19.2%	-6000	5	-112	20000	44	4.3%	20
6	90	17.1%	-4000	35	-75	24000	24	2.3%	24
7	66	12.5%	-2000	105	-37	28000	10	1.0%	28
8	21	4.0%	0	278	0	32000	17	1.6%	<b>3</b> 2
TOTAL	527		2000	411	37	36000	15	1.5%	36
			4000	353	75	40000	8	0.8%	40
2-GATE	SORTS	506	6000	264	112	44000	14	1.4%	44
DETECT	R SORTS	FREQ%	8000	103	149	48000	11	1.1%	48
8			10000	69	187	52000	6	0.6%	52
9	28	5.5%	12000	14	224	56000	9	0.9%	56
10	74	14.6%	14000	10	261	60000	2	0.2%	60
11	97	19.2%	16000	1	299	64000	5	0.5%	64
12	84	16.6%	18000	0	336	68000	3	0.3%	68
13	93	18.4%	20000	0	373	72000	9	0.9%	72
14	78	15.4%	22000	0	410	76000	1	0.1%	76
15	52	10.3%	24000	0	448	80000	Ō	0.0%	80
TOTAL	506		26000	0	485	84000	2	0.2%	84
			>28000	0	0	>84000	26	2.5%	>84
			TOTAL	1652		TOTAL	1033		
SUMMAR	Y TOTALS								
	HOT PARTI	CLE EVENTS	1007		SORTS BY	ONE GATE ONLY	527		
	MULTIPART	ICLE EVENTS	551		SORTS BY	TWO GATES	506		
	DISTRIBUT	ED EVENTS	0						

#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

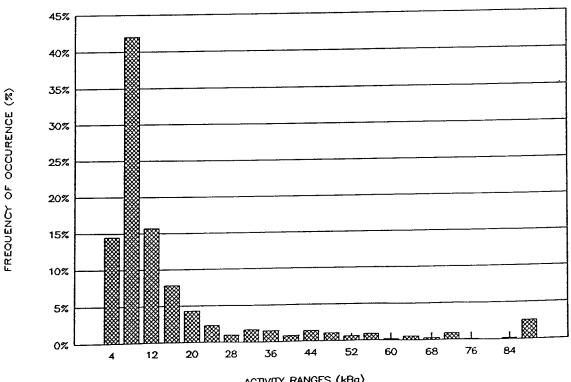
2.00 Empty belt

SORTER 1 LOG DATA FOR 26-Jan-93



## JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 26-Jan-93



ACTIVITY RANGES (kBq)

A-382

SORTER 2 26-Jan-93					
AVERAGE BACKGROUND COUNT RATE		0.79 ±	0.02 c/sec	<b>V</b>	
SORTER SOIL DENSITY		1.15 tons/	m <sub>2</sub>		
GROUND SOIL DENSITY		1.65 tons/	w <sub>3</sub>		
andono dott damen			CONTAMINATED	CLEAN	
MASS TOTAL			1.25 tons	87.1 ton	s
MAXIMUM/SORT			6 kg	53.6 kg	
MINIMUM/SORT			0.7 kg	47.5 kg	
WEIGHT RECOVERY OR VOLUME RECOVE	:RY				98.6%
EQUIVALENT SOIL-IN-GROUND			0.99 yd³	69.1 yd³	70.0 yd3/day
EGOTAVEENT 2015 IN GROOM			7-	,-	, , , , , , , , , ,
PARTICLE ACTIVITY (MAXIMUM ESTIM	IATE)				
TOTAL			15,043 kBq		
MAXIMUM/SORT	•	•	294 kBq		
MINIMUM/SORT			2.2 kBq		
DISPERSED + PARTICLE (REALISTIC	ESTIMATE) ACTI	VITY	7,240 kBq	6,377 kBq	
MAXIMUM/SORT			172 kBq	19 kBq	
MINIMUM/SORT			0 Bq	-17 kBq	
SPECIFIC ACTIVITY			5,795 Bq/kg	73 Bq/l	(g
WORK HISTORY					
WORK DAY START	07:00 AM		WORK DAY END	05:30 PM	
PLANT START-UP	07:00 AM		PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	07:59 AM		END SOIL PROCESSING	05:08 PM	
LUNCH START	11:30 AM-	N/A	LUNCH PERIOD	0.0 hr	
WORK HOURS			10.5 hr		
AVAILABLE HOURS			10.5 hr		
ACTUAL PROCESS H	OURS (total 20	-sec records)	9.16 hr		
DOWN-TIME	•		1.34 hr		
TOTAL SYSTEM PAU	SE		0.55 hr		
NONAVAILABLE HOU	RS		0.0 hr		
START-UP			0.99 hr		
SHUT-DOWN			0.35 hr		
PLANT PERFORMANC	E		87.2%		
PRODUCTIVITY			87.2%		
TOTAL SOIL PROCESSING RECORDS (2	-SEC and 20-SE	C)	2,653		
NONPROCESS RECORDS (Test, calibration)		-,	3		
20-SEC PROCESS RECORDS			1,649		
TOTAL SORT			0 MD>0 & MND=0		
NO SORT			784 AD=0 & MD=0		
SOME SORT			865 AD>0&0 < HD=0 0		
UNEXPLAINED RECO	pns		0 000 000 000		
0 <ad<1kbq &="" md="">0</ad<1kbq>	kus 6		V	UNEXPLAIN	PAUSE
D=0A				TIME	TIME
AD<0 8				08:56:59	07:26
ACT P <5 kBq	254	25.3%		10:00:39	3. <del></del>
WCI_R <2 KBQ	2.14	۵		.0.00.37	

11:22:39

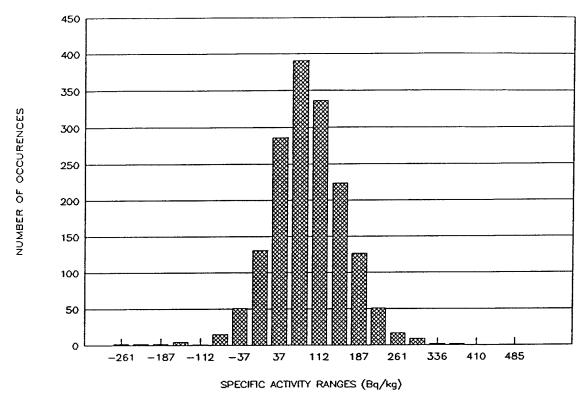
•	oro 601	מוד מכטונטט				16,490			1	1:22:39
2-1		INT PERIODS 2-SEC RECORD	C LITTH S	2190			(ACT_P >0 kBq)		1	2:20:39
		2-SEC RECORD			IN >1 DE	-	· -		1.	3:07:59
			DETECTO		218		83.8%		1.	3:29:59
			DETECTO		36		13.8%			
		_	DETECTO		6		2.3%			
			DETECTO		0		0.0%			
			DETECTO		0		0.0%			
			DETECTO		0		0.0%			
		-	DETECTO		0		0.0%			
		_	OTAL	ν.	_	260				
		NET 2-SEC RE		ZTQO2 UT		744				
		2-SEC PERIOD				15,746				
		AVG TIME BET				44.3				
		AVG TIME BET	WEEN 2-3	EC SURTS						
		512	ACT_ND	NIMRER	SPEC_A		ACT_P	SORT	FREQ%	ACT_P
1-GATE SO			_		(Bq/kg)		(Bq)	(#)		(kBq)
DETECTR	SORTS	FREQ%	(Bq)	(#)	(54) (5)					
_	70	5.9%	-14000	2	-261		4000	98	9.8%	4
1	30	20.1%	-12000	2	-224		8000	465	46.3%	8
2	103	20.1%	-10000	2	-187		12000	163	16.2%	12
3	105	20.3%	-8000	4	-149		16000	70	7.0%	16
4	104	15.0%	-6000	1	-112		20000	48	4.8%	20
5	77	10.5%	-4000	15	-75		24000	32	3.2%	24
6	54	6.4%	-2000	51	-37		28000	23	2.3%	28
7	33	1.2%	0	131	0		32000	10	1.0%	32
8	6 512	1.2%	2000	286	37		36000	12	1.2%	36
TOTAL	312		4000	391	75		40000	7	0.7%	40
2 0475 60	ND T C	492	6000	336	112		44000	11	1.1%	44
2-GATE SC	SORTS	FREQ%	8000	224	149		48000	5	0.5%	48
DETECTR	SURTS	( KL4%	10000	126	187		52000	3	0.3%	52
8 9	71	14.4%	12000	51	224		56000	10	1.0%	56
	96	19.5%	14000	17			60000	2	0.2%	60
10 11	113	23.0%	16000	9	299		64000	6	0.6%	64
12	92	18.7%	18000	2	336		68000	3	0.3%	68
13	59	12.0%	20000	2	373		72000	6	0.6%	72
14	47	9.6%	22000	0	410		76000	3	0.3%	76
15	14	2.8%	24000	0	448		80000	2	0.2%	80
TOTAL	492	2.0%	26000	0	485		84000	0	0.0%	84
IUIAL	472		>28000	0	0		>84000	25	2.5%	>84
			TOTAL	1652			TOTAL	1004		
SUMMARY T	2 IATO									
		ICLE EVENTS	1024		SORTS BY	ONE G	ATE ONLY	512		
		TICLE EVENTS	840		SORTS BY	TWO G	ATES	492		
		TED EVENTS	0							

#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

2.00 Empty belt

SORTER 2 LOG DATA FOR 26-Jan-93



## JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 26-Jon-93

50% 40% FREQUENCY OF OCCURENCE (%) 30% 20% 10% 0% 76 12 20 28 36 52 60 68 84

> ACTIVITY RANGES (kBq) A-385

SORTER 1 25-Jan-93	-			•
AVERAGE BACKGROUND COUNT RATE	0.74 ± 0.05	c/sec		
SORTER SOIL DENSITY	1.15 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³			
GROUND SUIL DENSITY		CONTAMINATED	CLEAN	
MASS TOTAL		1.15 tons	77.9 tons	
MASS TOTAL MAXIMUM/SORT		53.6 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	43.5 kg	
MINIMONY SOUT				
WEIGHT RECOVERY OR VOLUME RECOVERY				98.5%
EQUIVALENT SOIL-IN-GROUND		0.92 yd <sup>3</sup>	61.8 yd <sup>3</sup>	62.7 yd³/day
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)	•			
TOTAL		21,418 kBq		
MAXIMUM/SORT		939 kBq		
MINIMUM/SORT		2.2 kBq		
			3,449 kBq	
DISPERSED + PARTICLE (REALISTIC EST)	MATE) ACTIVITY	8,919 kBq	3,449 kBq 18 kBq	
MAXIMUM/SORT		674 kBq	-9 k8q	
MINIMUM/SORT		0 Bq	-y kbq 44 Bq/kg	
SPECIFIC ACTIVITY		7,725 Bq/kg	44 bq/kg	
				•
WORK HISTORY		HOOK DAY FUD	05:30 PM	
WORK DAY START	07:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	07:00 AM	PLANT SHUT-DOWN END SOIL PROCESSING		
START SOIL PROCESSING	07:41 AM		0.5 hr	
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 111	
		10.0 hr		
WORK HOURS		10.0 hr		
AVAILABLE HOURS	a constant 20 and pagends)	8.20 hr		
	S (total 20-sec records)	1.80 hr		
DOWN-TIME		1.89 hr		
TOTAL SYSTEM PAUSE		0.0 hr		
NONAVAILABLE HOURS	·	0.69 hr		
START-UP		0.39 hr		
SHUT-DOWN		82.0%		
PLANT PERFORMANCE		82.0%		
PRODUCTIVITY				
TOTAL SOIL PROCESSING RECORDS (2-SE	and 20-SEC)	2,641		
NONPROCESS RECORDS (Test, calibration		6		
20-SEC PROCESS RECORDS		1,476		
TOTAL SORT		1 MD>0 & MND=0		
NO SORT		807 AD=0 & MD=0 8		
SOME SORT		668 AD>0&0<	max&MND	
UNEXPLAINED RECORDS		0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	3		UNEXPLAIN	PAUSE
AD=0 & MI	0		TIME	TIME
AD<0 & MI	_		13:14:58	07:00
ACT_P <5 kBq	326 28.0%		13:39:58	11:11
<del>-</del> ·				

14,760

16:17:58

2.	-SEC COU	NT PERIODS				14,700	,				10.11.50
		2-SEC RECORD	S WITH S	ORTS	-	1,165	ACT_P	>0 kBq)			
		2-SEC RECORD	S WITH P	OSITIVES		TECTOR					
		2	DETECTO	RS	287		80.8%				
		3	DETECTO	RS	55		15.5%				
		4	DETECTO	RS	9		2.5%				
		5	DETECTO	RS	4		1.1%				
		6	DETECTO	RS	0		0.0%				
		7	DETECTO	RS	0		0.0%				
		8	DETECTO	RS	0		0.0%				
			OTAL			355					
		NET 2-SEC RE				810					
		2-SEC PERIOD	S WITH N	O SORTS		13,950					
		AVG TIME BET	WEEN 2-S	EC SORTS		36.4	sec				
		Ego	ACT NO	MIMPER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
1-GATE SO		580	ACT_ND				•	(Bq)	(#)		(kBq)
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(104)	(")		(4)
1	12	2.1%	-14000	0	-261			4000	147	12.6%	4
2	35		-12000	0	-224			8000	460	39.5%	8
3	88	15.2%	-10000	0	-187			12000	184	15.8%	12
4	102	17.6%	-8000	3	-149		•	16000	85	7.3%	16
5	107	18.4%	-6000	9	-112		;	20000	51	4.4%	20
6	109	18.8%	-4000	38	-75			24000	40	3.4%	24
7	99	17.1%	-2000	113	-37		;	28000	37	3.2%	28
8	28	4.8%	0	229	0		3	32000	18	1.5%	32
TOTAL	580		2000	336	37		:	36000	18	1.5%	36
			4000	297	75			40000	17	1.5%	40
2-GATE SO	ORTS	585	6000	222	112			44000	15	1.3%	44
DETECTR	SORTS	FREQ%	8000	140	149			48000	12	1.0%	48
8			10000	52	187			52000	9	0.8%	52
9	24	4.1%	12000	30	224		!	6000	6	0.5%	56
10	52	8.9%	14000	5	261		(	50000	9	0.8%	60
11	106	18.1%	16000	6	299		(	54000	4	0.3%	64
12	108	18.5%	18000	1	336		(	58000	6	0.5%	68
13	119	20.3%	20000	1	373		•	72000	3	0.3%	72
14	110	18.8%	22000	0	410		;	76000	4	0.3%	76
15	66	11.3%	24000	0	448		1	30000	5	0.4%	80
TOTAL	585		26000	0	485		1	34000	0	0.0%	84
			>28000	0	0		>{	34000	35	3.0%	>84
			TOTAL	1482			•	TOTAL	1165		
SUMMARY 1	TOTALS										
HC	OT PARTI	CLE EVENTS	1121		SORTS BY	ONE C	SATE ONL'	ľ	580		
M	JLTIPART	ICLE EVENTS	528		SORTS BY	TWO 0	EATES		585		
Di	ISTRIBUT	ED EVENTS	78								

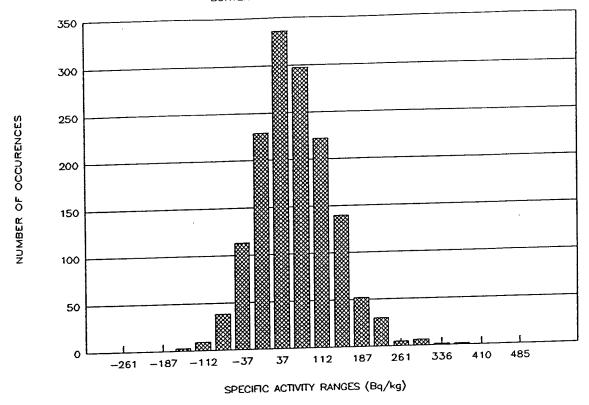
#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

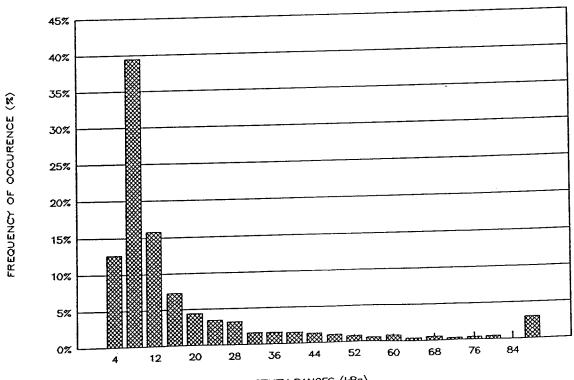
2.00 Empty belt

2-SEC COUNT PERIODS

SORTER 1-LOG DATA FOR 25-Jon-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 25-Jan-93



ACTIVITY RANGES (kBq)

A-388

SORTER 2 25-Jan-93					•
AVERAGE BACKGROUND COUNT RATE		0.80 ± 0	.03 c/sec		
SORTER SOIL DENSITY		1.15 tons/m³			
GROUND SOIL DENSITY		1.65 tons/m <sup>3</sup>			
			CONTAMINATED	CLEAN	
MASS TOTAL			1.39 tons	77.8 tons	S
MAXIMUM/SORT			6.7 kg	53.6 kg	
MINIMUM/SORT			0.7 kg	46.9 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY					98.2%
EQUIVALENT SOIL-IN-GROUND			1.10 yd³	61.6 yd³	62.7 yd3/day
EDOLANTEN! 2015-14-040040			•		
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	)				
TOTAL	•		20,307 kBq		
MAXIMUM/SORT		•	687 kBq		
MINIMUM/SORT			2.7 kBq		
Markony sour					
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTIV	VITY	9,369 kBq	6,366 kBq	
MAXIMUM/SORT			553 kBq	19 kBq	
MINIMUM/SORT			p8 0	-10 kBq	
SPECIFIC ACTIVITY			6,749 Bq/kg	82 Bq/1	(g
WORK HISTORY					
WORK DAY START	07:00 AM		WORK DAY END	05:30 PM	
PLANT START-UP	07:00 AM		PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	07:41 AM		END SOIL PROCESSING		
LUNCH START	11:30 AM		LUNCH PERIOD	0.5 hr	
WORK HOURS			10.0 hr		
AVAILABLE HOURS			10.0 hr		
ACTUAL PROCESS HOUR	S (total 20	-sec records)	8.21 hr		
DOWN-TIME			1.79 hr		
TOTAL SYSTEM PAUSE			1.88 hr		
NONAVAILABLE HOURS			0.0 hr		
START-UP			0.69 hr		
SHUT-DOWN			0.40 hr		•
PLANT PERFORMANCE			82.1% 82.1%		
PRODUCTIVITY			02.1%		
TOTAL SOIL PROCESSING RECORDS (2-SE	C and 20-SE	<b>c)</b>	2,654		
NONPROCESS RECORDS (Test, calibrati			6		
20-SEC PROCESS RECORDS			1,477		
TOTAL SORT			0 MD>0 & MND=	)	
NO SORT			639 AD=0 & MD=0	& MND>0	
SOME SORT			838 AD>0&0 <md<mi< td=""><td>OMAX&amp;MND</td><td>x</td></md<mi<>	OMAX&MND	x
UNEXPLAINED RECORDS			0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	1			UNEXPLAIN	PAUSE
M & 0=0A	<b>0</b> 0			TIME	TIME
AD<0 & M	<b>0</b> 0			10:25:19	07:00
ACT_P <5 kBq	291	24.7%			11:11

2-	SEC COL	INT PERIODS				14,770					
_	520 55	2-SEC RECORD	S WITH SO	ORTS	-		(ACT_P	>0 kBq)			
		2-SEC RECORD	S WITH PO	OSITIVES	IN >1 DE	TECTOR					
			DETECTOR		260		80.7%				
		3	DETECTOR	RS	54		16.8%				
		4	DETECTOR	RS	8		2.5%				
		5	DETECTOR	RS	0		0.0%				
		6	DETECTO	RS	0		0.0%				
		7	DETECTOR	RS	0		0.0%				
		8	DETECTO	RS	0		0.0%				
		T	OTAL			322					
		NET 2-SEC RE	CORDS WI	TH SORTS		855					
		2-SEC PERIOD				13,915					
		AVG TIME BET				34.5	sec				
											40T D
1-GATE SC	ORTS	599	ACT_ND	NUMBER	SPEC_A			ACT_P		FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)
DETECT											,
1	31	5.2%	-14000	0	-261			4000	122		4
2	118		-12000	0	-224			8000	514		8
3	127		-10000	1	-187			12000	173		12
4	126	21.0%	-8000	2	-149			16000	94	8.0%	16
5	108	18.0%	-6000	2	-112			20000	53		20 24
6	61	10.2%	-4000	10	-75			24000	49		28
7	15	2.5%	-2000	41	-37			28000	23		32
8	13	2.2%	0	125	0			32000	20		36
TOTAL	599	•	2000	247				36000	29		40
			4000	301	75			40000	11		44
2-GATE S	ORTS	578	6000	282				44000	10		48
DETECTR	SORTS	FREQ%	8000	224	149			48000	8		52
8			10000	141	187			52000	5		56
9	80	13.8%	12000	66				56000	7		60
10	108	18.7%	14000	25				60000	9		64
11	133	23.0%	16000	12				64000	5		68
12	120	20.8%	18000	3				68000	3		72
13	86	14.9%	20000	1				72000	5		76
14	34	5.9%	22000	0				76000	3		80
				^	//9			80000	4	0.3%	60

SUMMARY TOTALS

15

TOTAL

17

578

HOT PARTICLE EVENTS 1165 SORTS BY ONE GATE ONLY 599
MULTIPARTICLE EVENTS 909 SORTS BY TWO GATES 578
DISTRIBUTED EVENTS 0

0

0

0

1483

448

485

#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

2.9% 24000

26000

TOTAL

>28000

- 2.00 Empty belt
- 3.00 Test (No process soil)

84

>84

0.3%

2.3%

3 0.3%

4

27

1177

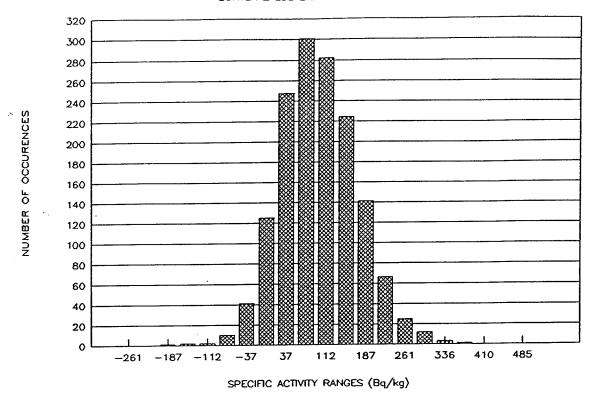
80000

84000

>84000

TOTAL

SORTER 2 LOG DATA FOR 25-Jon-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 25-Jon-93

50% 45% 40% FREQUENCY OF OCCURENCE (%) 35% 30% 25% 20% 15% 10% 5% 0% 68 76 12 36 20 28

ACTIVITY RANGES (kBq)

A-391

SORTER 1 23-Jan-93	_			
COUNT DATE	0.74 ± 0	0.06 c/sec		
AVERAGE BACKGROUND COUNT RATE	1.15 tons/m³			
SORTER SOIL DENSITY	1.65 tons/m³			
GROUND SOIL DENSITY		CONTAMINATED	CLEAN	
MACC TOTAL		1.10 tons	55.0 tons	;
MASS TOTAL  MAXIMUM/SORT		8.7 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	44.9 kg	
MINIMONY SORT				
WEIGHT RECOVERY OR VOLUME RECOVERY				98.0%
EQUIVALENT SOIL-IN-GROUND		0.87 yd³	43.6 yd³	44.5 yd3/day
EGOTANEENT GOTE IN CHOOMS				
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	)			
TOTAL		20,155 kBq		
MAXIMUM/SORT		646 kBq		
MINIMUM/SORT		2.0 kBq		
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTIVITY	8,451 kBq	3,536 kBq	
MAXIMUM/SORT		463 kBq	17 kBq	
MINIMUM/SORT		0 Bq	-12 k8q	
SPECIFIC ACTIVITY		7,701 Bq/kg	64 Bq/k	g
WORK HISTORY				
WORK DAY START	07:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	07:00 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	MA 80:80	END SOIL PROCESSING		
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr	
		40.04		
WORK HOURS		10.0 hr		
AVAILABLE HOURS		10.0 hr		
	(total 20-sec records)	5.82 hr 4.18 hr		
DOWN-TIME		4.10 ftr 3.92 hr		
TOTAL SYSTEM PAUSE		0.0 hr		
NONAVAILABLE HOURS		1.14 hr		
START-UP		1.04 hr		
SHUT-DOWN		58.2%		
PLANT PERFORMANCE		58.2%		
PRODUCTIVITY		30.24		
TOTAL SOIL PROCESSING RECORDS (2-SEC	and 20-SEC)	2,244		
NONPROCESS RECORDS (Test, calibration		14		
20-SEC PROCESS RECORDS	MI, CCC)	1,047		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		457 AD=0 & MD=0 &	MND>0	
SOME SORT		590 AD>0&0 <md<mn[< td=""><td>)max&amp;MND <mndmax< td=""><td></td></mndmax<></td></md<mn[<>	)max&MND <mndmax< td=""><td></td></mndmax<>	
UNEXPLAINED RECORDS		0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		UNEXPLAIN	PAUSE
AD=0 & MD			TIME	TIME
AD<0 & MD			None	07:05
ACT P <5 kBq	362 30.2%			11:12
101_1 S 104				

10,470

ā	2-SEC COUN	IT PERIODS				10,470					12.22
	2	-SEC RECORD	S WITH S	ORTS		1,197	7 (ACT_P >0	(Bq)			16:30
	2	-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTO	ł				
		2	DETECTO	RS	271		77.4%				
		3	DETECTO	RS	62		17.7%				
		4	DETECTO	RS	12		3.4%				
		5	DETECTO	RS	5		1.4%				
		6	DETECTO	RS	0		0.0%				
		7	DETECTO	RS	0		0.0%				
		8	DETECTO	RS	0		0.0%				
		τ	OTAL			350	)				
	N	ET 2-SEC RE	CORDS WI	TH SORTS		847	•				
	2	-SEC PERIOD	S WITH N	O SORTS		9,623	;				
	A	VG TIME BET	WEEN 2-S	EC SORTS		24.7	sec .				
		F00	ACT ND	MIMOCO	CDEC A		ACT_F	. SUBT	FREQ%	ACT_P	
1-GATE S		599	ACT_ND		SPEC_A		(Bq		1 UC#10	(kBq)	
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(64.	(#)		(104)	
1	12	2.0%	-14000	0	-261		4000	188	15.7%	4	
2	45	7.5%	-12000	4	-224		8000	461	38.5%	8	
3	70	11.7%	-10000	4	-187		12000	175	14.6%	12	
4	105	17.5%	-8000	3			16000	92	7.7%	16	
5	124	20.7%	-6000	4	-112		20000	57	4.8%	20	
6	100	16.7%	-4000	19	-75		24000		3.9%	24	
7	107	17.9%	-2000	53	-37		28000		3.2%	28	
8	36	6.0%	0	109	0		32000		2.0%	32	
TOTAL	599	0.0%	2000	200	37		36000		1.1%	36	
TOTAL	,,,		4000	218	75		40000		1.0%	40	
2-GATE S	enøts	598	6000	201	112		44000		0.9%	44	
DETECTR	SORTS	FREQ%	8000	118	149		48000		0.5%	48	
8	000		10000	78	187		52000		0.8%	52	
9	27	4.5%	12000	36	224		56000		0.7%	56	
10	57	9.5%	14000	12	261		60000		0.6%	60	
11	88	14.7%	16000	1	299		64000		0.4%	64	
12	124	20.7%	18000	1	336		68000		0.2%	68	
13	120	20.1%	20000	0	373		72000		0.1%	72	
14	100	16.7%	22000	0	410		, 76000		0.5%	76	
15	82	13.7%	24000	0	448		80000		0.3%	80	
TOTAL	598		26000	0	485		84000		0.2%	84	
	2,0		>28000	0	0		>84000		2.3%	>84	
			TOTAL	1061	,		TOTAL				
SUMMARY	2 IATOT		TOTAL	1001				• • • •			
	OT PARTIC	IF EVENTS	1160		SORTS BY	ONE G	ATE ONLY	599			
		CLE EVENTS	484		SORTS BY			598			
	ISTRIBUTE		0				· · · <del>- ·</del>				
	TAINIDUIE	LICHIS	Ū								

#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

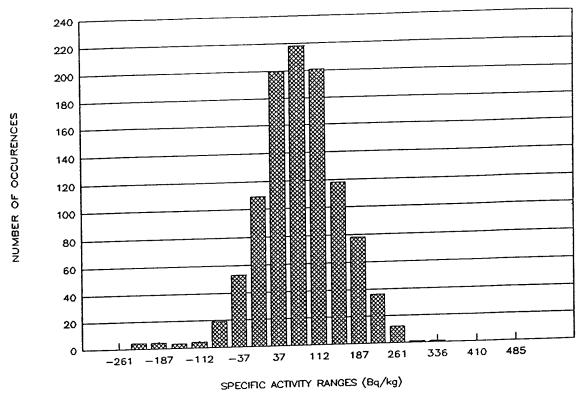
2.00 Empty belt

2-SEC COUNT PERIODS

3.00 Test (No process soil)

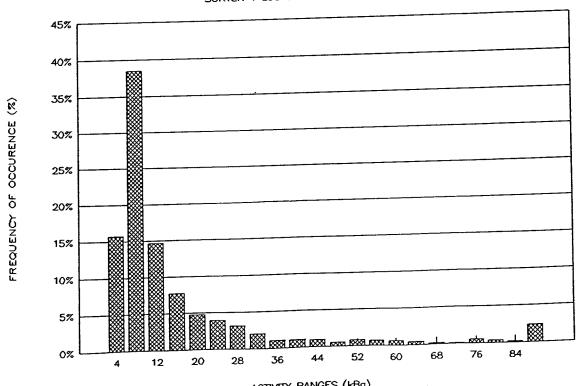
12:22

SORTER 1"LOG DATA FOR 23-Jan-93



# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 23-Jon-93



ACTIVITY RANGES (kBq)

A-394

					act -
SORTER 2 23-Jan-93		-		.1	conection was in
AVERAGE BACKGROUND COUNT RATE		0.61 ±	0.02 c/sec	MOI	Lu you
SORTER SOIL DENSITY		1.15 tons/	′m³	/ 10 d	Will
GROUND SOIL DENSITY		1.65 tons/	m³	/ 0	•
			CONTAMINATED	CLEAN	
MASS TOTAL			(0.13 tons)	1.2 ton	s )
MAXIMUM/SORT			53.6 kg	53.6 kg	
MINIMUM/SORT			0.7 kg	50.9 kg	
WEIGHT RECOVERY OR VOLUME RECOVE	ERY				90.0%
EQUIVALENT SOIL-IN-GROUND			0.10 yd³	0.9 yd3	1.0 yd³/day
PARTICLE ACTIVITY (MAXIMUM ESTIM	MATE)				
TOTAL			19,123 kBq		
MAXIMUM/SORT			994 kBq		
MINIMUM/SORT			2.6 kBq		
DISPERSED + PARTICLE (REALISTIC	ESTIMATE) ACTIV	ITY	120 kBq	259 kBq	
MAXIMUM/SORT			29 kBq	19 kBq	
MINIMUM/SORT			0 Bq	-11 kBq	
SPECIFIC ACTIVITY			934 Bq/kg	223 Bq/	kg
WORK HISTORY					
WORK DAY START	07:00 AM		WORK DAY END	05:30 PM	
PLANT START-UP	07:00 AM		PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	MA 80:80		END SOIL PROCESSIN		
LUNCH START	11:30 AM		LUNCH PERIOD	0.5 hr	
WORK HOURS			10.0 hr		
AVAILABLE HOURS			10.0 hr		
ACTUAL PROCESS H	HOURS (total 20-	sec records	) 0.13 hr		
DOWN-TIME			9.87 hr		
TOTAL SYSTEM PAL	JSE		8.49 hr		
NONAVAILABLE HOU	JRS		0.0 hr		
START-UP			1.14 hr		
SHUT-DOWN			1.03 hr		act -
PLANT PERFORMANO	Œ		1.3%	* 1	Medi
PRODUCTIVITY			1.3%	with the	rupted, t
TOTAL SOIL PROCESSING RECORDS (2	2-SEC and 20-SEC	)	(1,082)	Lite Co	Jid Na
NONPROCESS RECORDS (Test, calibr	ration, etc)		7	The new	
20-SEC PROCESS RECORDS			24	Mush	
TOTAL SORT			2 MD>0 & MND=	o . West	
NO SORT			10 AD=0 & MD=0	& MND>0	
SOME SORT				NDmax&MND⊲MNDma	
UNEXPLAINED RECO	ORDS		0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	0			UNEXPLAIN	PAUSE
AD=0	0 OM &			TIME	TIME
AD<0	0 OM &			None	07:05
ACT_P <5 kBq	254	24.0%			08:15

		52.	74.							
2-	SEC COUNT				_	240				
	2-	SEC RECORDS	WITH SO	RTS			CT_P >0 kBq)			
	2-	SEC RECORDS	WITH PO	SITIVES	IN >1 DET	ECTOR				
			DETECTOR		216	80	.3%			
		3	DETECTOR	s	46	17	. 1%			
		4	DETECTOR	s	7	2	.6%			
		5	DETECTOR	s	0	0	.0%			
			DETECTOR		0	0	.0%			
		7	DETECTOR	:S	0	0	.0%			
		8	DETECTOR	:S	0	0	.0%			
			DTAL			269				
	NE	T 2-SEC REC		H SORTS		789				
		SEC PERIODS				(549)				
		G TIME BET				0.6 se	С			
	^'	70 77110 0011								
4 0475 6	ODTC	531	ACT ND	NUMBER	SPEC_A		ACT_P	SORT	FREQ%	ACT_P
1-GATE S		FREQ%	(Bq)		(Bq/kg)		(Bq)	(#)		(kBq)
DETECTR	SORTS	, KLWA	(24)	•	•					
	25	4.7%	-14000	0	-261		4000	98	9.3%	4
1	60	11.3%	-12000	0	-224		8000	479	45.3%	8
2	105	19.8%	-10000	1	-187		12000	161	15.2%	12
3	95	17.9%	-8000	0	-149		16000	93	8.8%	16
4	100	18.8%	-6000	2	-112		20000	53	5.0%	20
5		15.4%	-4000	0	-75		24000	19	1.8%	24
6	82 53	10.0%	-2000	0	-37		28000	22	2.1%	28
7	)) 11	2.1%	0	3	0		32000	23	2.2%	32
8	531	2.17	2000	0	37		36000	12	1.1%	36
TOTAL	331		4000	1	75		40000	18	1.7%	40
2 2475 6	2700	527	6000	0	112		44000	8	0.8%	44
2-GATE S		FREQ%	8000	0			48000	8	0.8%	48
DETECTR	SORTS	INCAN	10000	1	187		52000	6	0.6%	52
8	£2	9.9%	12000	3			56000	6	0.6%	56
9	52	13.1%	14000	3			60000	8	0.8%	60
10	69	19.4%	16000	4			64000	5	0.5%	64
11	102		18000	4	336		68000	1	0.1%	68
12	106	20.1%	20000	4	373		72000	3	0.3%	72
13	94	14.6%	22000	0			76000	2	0.2%	76
14	77		24000	0			80000	3	0.3%	80
15	27	5.1%	26000	0			84000	2	0.2%	84
TOTAL	527		>28000	0	_		>84000	28	2.6%	>84
			TOTAL	26	-		TOTAL	1058		
OI 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	TOTALC		TOTAL							
SUMMARY	IUIALS OT PARTIC	IE EVENTS	14		SORTS BY	ONE GATE	ONLY	531		
		CLE EVENTS	19			TWO GATE		527		
	ISTRIBUTE		158							
L	121V1DO1C	D C10413								

#### REC CODE EXPLANATION

08:19

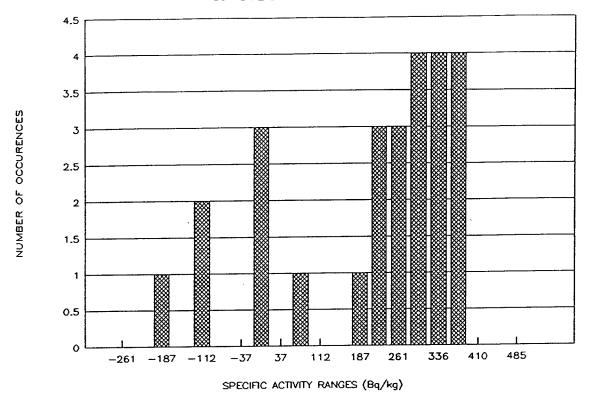
08:22 08:24 08:24 08:26 08:26 08:28 08:29 08:30 08:31 08:32 08:34 More

<sup>1.00</sup> Source check (Soil on belt)

<sup>2.00</sup> Empty belt

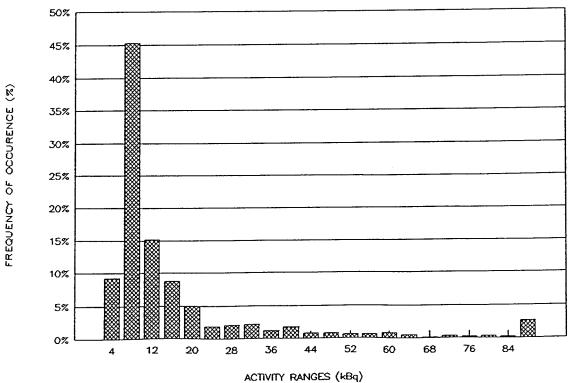
<sup>3.00</sup> Test (No process soil)

SORTER 2 LOG DATA FOR 23-Jon-93



## JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 23-Jon-93



A-397

SORTER 1 22-Jan-93	-			
AVERAGE BACKGROUND COUNT RATE	0.75 ± 0	.05 c/sec		
SORTER SOIL DENSITY	1.15 tons/m³	•		
GROUND SOIL DENSITY	1.65 tons/m <sup>3</sup>			
CKOOKD SOIL DENSITY		CONTAMINATED	CLEAN	
MACC TOTAL		2.65 tons	69.4 tons	
MASS TOTAL  MAXIMUM/SORT		53.6 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	45.5 kg	
MINIPOLY SON				0/ 79/
WEIGHT RECOVERY OR VOLUME RECOVERY			"	96.3%
EQUIVALENT SOIL-IN-GROUND		2.10 yd³	55_0 yd³	57.1 yd3/day
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	)			
TOTAL		56,145 kBq		
MAXIMUM/SORT		7,864 kBq		
MINIMUM/SORT		2.0 kBq		
			10,160 kBq	
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTIVITY	22,575 kBq	19 kBq	
MAXIMUM/SORT		5976 kBq	-9 kBq	
MINIMUM/SORT		0 Bq	146 Bq/kg	
SPECIFIC ACTIVITY		8,534 Bq/kg	140 847 69	
WORK HISTORY		HODE DAY END	05:30 PM	
WORK DAY START	07:00 AM	WORK DAY END PLANT SHUT-DOWN	05:30 PM	
PLANT START-UP	07:00 AM	END SOIL PROCESSING	05:00 PM	
START SOIL PROCESSING	08:03 AM	LUNCH PER100	0.5 hr	
LUNCH START	11:30 AM	LUNCH PERIOD	-	
		10.0 hr		
WORK HOURS		10.0 hr		
AVAILABLE HOURS	S (total 20-sec records)	7.47 hr		
	5 (total 20 see records)	2.53 hr		
DOWN-TIME TOTAL SYSTEM PAUSE		2.60 hr		
NONAVAILABLE HOURS		0.0 hr		
		1.06 hr		
START-UP		0.50 hr		
SHUT-DOWN		74.7%		
PLANT PERFORMANCE		74.7%		
PRODUCTIVITY				
TOTAL SOIL PROCESSING RECORDS (2-SE	C and 20-SEC)	3,238		
NONPROCESS RECORDS (Test, calibrati		10		
20-SEC PROCESS RECORDS		1,344		
TOTAL SORT		14 MD>0 & MND=0		
NO SORT		382 AD=0 & MD=0		
SOME SORT		948 AD>0&0 <md<mn< td=""><td>xemQNM&gt;QNM3xemQ</td><td></td></md<mn<>	xemQNM>QNM3xemQ	
UNEXPLAINED RECORDS	}	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		UNEXPLAIN	PAUSE
AD=0 & M			TIME	TIME
AD<0 & M			None	06:54
ACT_P <5 kBq	577 30.5%			11:00
<del>-</del> '				

13,440

2.	- SEC COC	INT PERTOUS			-	13,440					
		2-SEC RECORD	S WITH S	ORTS		1,894	(ACT_P	>0 kBq)			
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR					
		2	DETECTO	RS	434		78.5%				
		3	DETECTO	RS	90		16.3%				
		4	DETECTO	RS	24		4.3%				
		5	DETECTO	RS	5		0.9%				
		6	DETECTO	RS	0		0.0%				
		7	DETECTO	RS	0		0.0%				
		8	DETECTO	RS	0		0.0%				
		T	OTAL			553					
		NET 2-SEC RE	CORDS WI	TH SORTS		1,341					
		2-SEC PERIOD	S WITH N	O SORTS		12,099					
		AVG TIME BET	WEEN 2-S	EC SORTS		20.0	sec				
1-GATE SO	ORTS	963	ACT_ND	NUMBER	SPEC_A		A	CT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)
											_
1	56	5.8%	-14000	0				4000	293		4
2	116	12.0%	-12000	2				8000	743		8
3	151	15.7%	-10000	1	-187			2000	264	13.9%	12
4	151	15.7%	-8000	6	-149			6000	150		16
5	180	18.7%	-6000	9	-112		2	0000	96		20
6	154	16.0%	-4000	17	-75		2	4000	48		24
7	118	12.3%	-2000	23	-37		2	8000	45	2.4%	28
8	37	3.8%	0	74	0		3	2000	42	2.2%	32
TOTAL	963		2000	87	37		3	5000	32	1.7%	36
			4000	110	75		4	0000	26	1.4%	40
2-GATE SC	ORTS	931	6000	159	112		4	4000	10	0.5%	44
DETECTR	SORTS	FREQ%	8000	188	149		4	8000	17	0.9%	48
8			10000	210	187		5	2000	11	0.6%	52
9	95	10.2%	12000	195	224		5	5000	12	0.6%	56
10	128	13.7%	14000	137	261		6	0000	12	0.6%	60
11	167	17.9%	16000	87	299		6	4000	9	0.5%	64
12	162	17.4%	18000	43	336		6	3000	7	0.4%	68
13	162	17.4%	20000	6	373		73	2000	12	0.6%	72
14	128	13.7%	22000	0	410		70	5000	2	0.1%	76
15	89	9.6%	24000	0	448		80	0000	2	0.1%	80
TOTAL	931		26000	0	485		84	4000	4	0.2%	84
			>28000	0	0		>84	000	57	3.0%	>84
			TOTAL	1354			TO	DTAL	1894		
SUMMARY T	OTALS										
HO	T PARTI	CLE EVENTS	1833		SORTS BY	ONE GA	TE ONLY		963		
MU	LTIPART	ICLE EVENTS	1054		SORTS BY	TWO GA	TES		931		
DI	STRIBUT	ED EVENTS	1070								

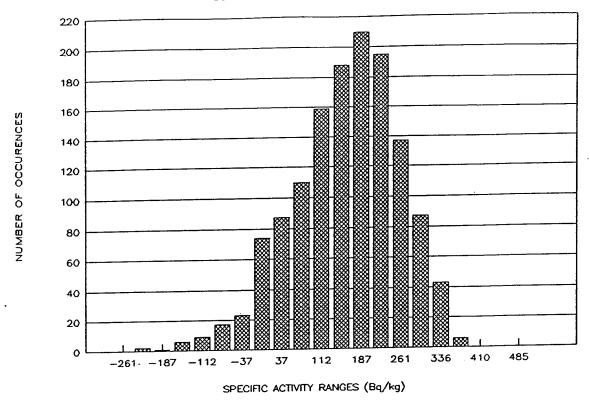
#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt

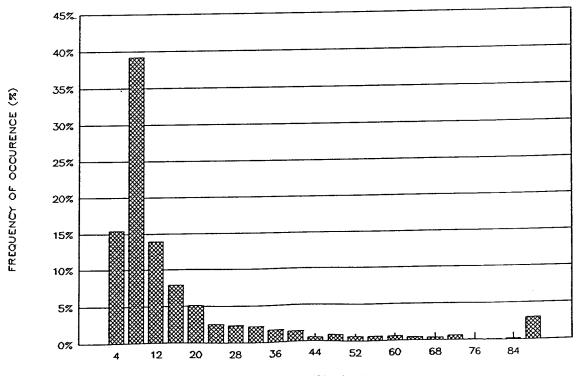
2-SEC COUNT PERIODS

3.00 Test (No process soil)

SORTER 1-LOG DATA FOR 22-Jan-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 22-Jon-93



ACTIVITY RANGES (kBq)

A-400

SORTER 2 22-Jan-93	-			•
AVERAGE BACKGROUND COUNT RATE	0.80 ± 0.0	02 c/sec		
SORTER SOIL DENSITY	1.15 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³			
		CONTAMINATED	CLEAN	
MASS TOTAL		3.89 tons	67.5 tons	
MAXIMUM/SORT		53.6 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	44.9 kg	
TO LOUIS DECOVERY				94.5%
WEIGHT RECOVERY OR VOLUME RECOVERY		3.09 yd <sup>3</sup>	53.5 yd³	56.6 yd3/day
EQUIVALENT SOIL-IN-GROUND		2007 / 2	,	•
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	Ε)			
TOTAL		30,976 kBq	•	
MAXIMUM/SORT		544 kBq		
MINIMUM/SORT		2.6 kBq		
DISPERSED + PARTICLE (REALISTIC ES	TIMATES ACTIVITY	15,776 kBq	11,446 kBq	
	IIMAIE) ACIIVIII	439 kBq	18 kBq	
MAXIMUM/SORT		0 Bq	-13 kBq	
MINIMUM/SORT SPECIFIC ACTIVITY		4,051 Bq/kg	170 Bq/k	9
SPECIFIC ACTIVITY		Most of M		
WORK HISTORY				
WORK DAY START	07:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	07:00 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	08:03 AM	END SOIL PROCESSING		
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr	
WORK HOURS		10.0 hr		
AVAILABLE HOURS		10.0 hr		
	RS (total 20-sec records)	7.41 hr		
DOWN-TIME	•	2.59 hr		
TOTAL SYSTEM PAUSE		2.60 hr		
NONAVAILABLE HOURS		0.0 hr		
START-UP		1.06 hr		
SHUT-DOWN		0.55 hr		
PLANT PERFORMANCE	•	74.1%		
PRODUCTIVITY		74.1%		
TOTAL SOIL PROCESSING RECORDS (2-SI	(C and 20-SEC)	3,244		
NONPROCESS RECORDS (Test, calibrat		12		
20-SEC PROCESS RECORDS	,,	1,333		
TOTAL SORT		25 MD>0 & MND=0		
NO SORT		231 AD=0 & MD=0 &	MND>0	
SOME SORT		1,077 AD>0&0 <md<mnc< td=""><td></td><td></td></md<mnc<>		
UNEXPLAINED RECORDS	}	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	3		UNEXPLAIN	PAUSE
AD=0 & I			TIME	TIME
AD < 0 & 4			09:43:05	06:54
ACT_P <5 kBq	531 27.8%		14:46:45	11:00

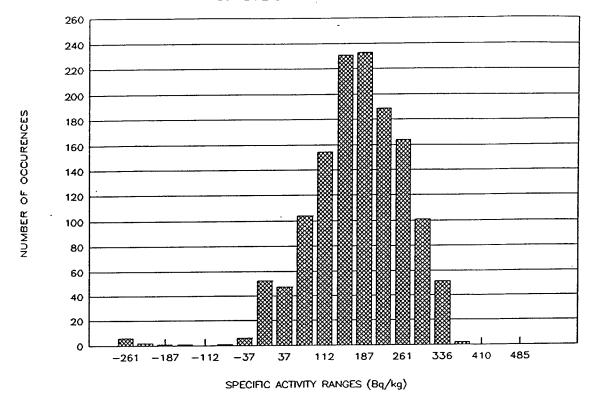
15:23:25

_	050 COUNT	T PERIODS			. 1	3,330				15	:23:25
2-	SEC LOOM	-SEC RECORDS	UITH SO	RTS		1,911	(ACT_P	>0 kBq)			
	2	-SEC RECORDS	UITH PO	SITIVES	IN >1 DET	ECTOR					
	2		DETECTOR		450		81.4%				
			DETECTOR		89		16.1%				
			DETECTOR		12		2.2%				
		-	DETECTOR		2		0.4%				
			DETECTOR		0		0.0%				
			DETECTOR		0		0.0%				
			DETECTOR		0		0.0%				
			OTAL			553					
		ET 2-SEC REC		H SORTS		1,358					
		SEC PERIODS				11,972					
		VG TIME BET	TEEN 2-SE	C SORTS		19.6					
	A	VG TIME BETT	MEEN & JE	.0 000				:			
	:	957	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
1-GATE SC			(Bq)		(Bq/kg)			(Bq)	(#)		(kBq)
DETECTR	SORTS	FREQ%	(bq)	\" <i>,</i>	1-4-0						
	20	2.1%	-14000	6	-261			4000	246	12.9%	4
1	20	11.0%	-12000	2	-224			8000	835	43.7%	8
2	105		-10000	1	-187			12000	273	14.3%	12
3	162	16.9%	-8000	1	-149			16000	150	7.8%	16
4	183	19.1%	-6000	0	-112			20000	76	4.0%	20
5	177	18.5%	-4000	1	-75			24000	70	3.7%	24
6	162	16.9%		6	-37			28000	39	2.0%	28
7	127	13.3%	-2000 0	52	_			32000	25	1.3%	32
8	21	2.2%		47				36000	22	1.2%	36
TOTAL	957		2000	104				40000	23	1.2%	40
		051	4000	154				44000	24	1.3%	44
2-GATE S		954	6000 8000	231				48000	11	0.6%	48
DETECTR	SORTS	FREQ%	10000	233				52000	20	1.0%	52
8		F 5%	12000	189				56000	13	0.7%	56
9	52	5.5%	14000	164				60000	7	0.4%	60
10	104	10.9%	16000	101				64000	7	0.4%	64
11	193	20.2%	18000	51				68000	5	0.3%	68
12	192	17.9%	20000	2				72000	4	0.2%	72
13	171	17.9%	22000	0				76000	4	0.2%	76
14	162	8.4%	24000	0				80000	4	0.2%	80
15	80	0.4*	26000	0				84000	3	0.2%	84
TOTAL	954		>28000	0	_			>84000	50	2.6%	>84
			TOTAL	1345	,			TOTAL	1911		
			FOINE	(34)	•						
SUMMARY		ALE EVENTS	1007		SORTS B	Y ONE	GATE ON	ILY	957		
		CLE EVENTS	1907 2027		SORTS B'				954		
		ICLE EVENTS	1890		555						
D	121KIRO1	ED EVENTS	1070								

#### REC CODE EXPLANATION

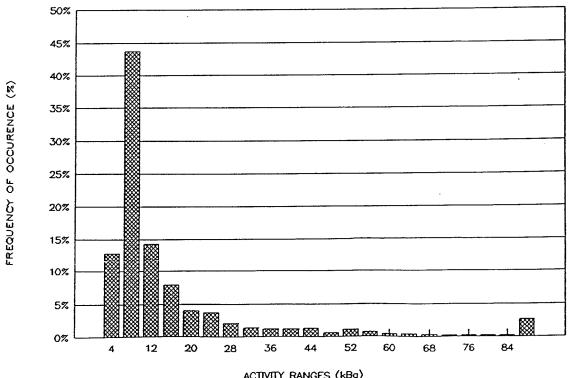
- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 22-Jan-93



## JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 22-Jan-93



ACTIVITY RANGES (kBq)

A-403

SORTER 1 20-Jan-93		·		•
SURTER		A4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		
AVERAGE BACKGROUND COUNT RATE	****	.06 c/sec		
SORTER SOIL DENSITY	1.15 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³	CONTAMINATED	CLEAN	
		0.92 tons	27.3 tons	
MASS TOTAL		53.6 kg	53.6 kg	
MAXIMUM/SORT		0.7 kg	46.9 kg	
MINIMUM/SORT		0.7 kg		
				96.8%
WEIGHT RECOVERY OR VOLUME RECOVERY		0.73 yd³	21.6 yd3	22.3 yd3/day
EQUIVALENT SOIL-IN-GROUND		•••• <i>γ</i> =		
TOTAL MANAGEMENT COTING	res			
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	12)	12,791 kBq		
TOTAL		1,138 kBq		
MAXIMUM/SORT		2.7 kBq		
MINIMUM/SORT				
DISPERSED + PARTICLE (REALISTIC ES	STIMATE) ACTIVITY	5,690 kBq	4,682 kBq	
MAXIMUM/SORT		765 kBq	19 kBq	
MINIMUM/SORT		0 Bq	-15 kBq	
SPECIFIC ACTIVITY		6,215 Bq/kg	172 Bq/kg	
SPECIFIC ACTIVITY				
WORK HISTORY				
WORK DAY START	07:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	07:00 AM	PLANT SHUT-DOWN	11:30 AM	
START SOIL PROCESSING	08:07 AM	END SOIL PROCESSING	11:02 AM	
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr	
		40.0 %-		
WORK HOURS		10.0 hr 4.5 hr		
AVAILABLE HOURS		2.92 hr		
ACTUAL PROCESS HO	URS (total 20-sec records)	1.58 hr		
DOWN-TIME		1.21 hr		
TOTAL SYSTEM PAUS		5.5 hr		
NONAVAILABLE HOUR	S	1.12 hr		
START-UP		0.47 hr		
SHUT-DOWN		64.9%		
PLANT PERFORMANCE		29.2%		
PRODUCTIVITY				
TOTAL SOIL PROCESSING RECORDS (2-	SEC and 20-SEC)	1,296		
NONPROCESS RECORDS (Test, calibra		8		
20-SEC PROCESS RECORDS	•	526		
TOTAL SORT		2 MD>0 & MND=0		
NO SORT		150 AD=0 & MD=0		
SOME SORT		374 AD>0&0 <md<mn< td=""><td>Dmax&amp;MND<mndmax< td=""><td></td></mndmax<></td></md<mn<>	Dmax&MND <mndmax< td=""><td></td></mndmax<>	
UNEXPLAINED RECOR	DS	0		0.1155
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		UNEXPLAIN	PAUSE
AD=0 &	MD 0		TIME	TIME 06:53
& 0>DA	MD 0		None	07:26
ACT_P <5 k8q	259 33.6%			Q1 . ZU
-				

5,260

1-GATE SORT DETECTR S	1	3 4 5 6 7 8	S WITH POST OF THE	OSITIVES RS	184 32 6 2 0 0		82.1% 14.3% 2.7% 0.9% 0.0% 0.0% 0.0%	>0 kBq)			
	i i	2 3 4 5 6 7 8 1 1ET 2-SEC RE 2-SEC PERIOD 1VG TIME BET 373	DETECTOR DETECTOR DETECTOR DETECTOR DETECTOR OTAL CORDS WITH NO WEEN 2-SI	RS R	184 32 6 2 0 0	224 546 4,714	14.3% 2.7% 0.9% 0.0% 0.0% 0.0%				
	rs	3 4 5 6 7 8 1 1ET 2-SEC RE 2-SEC PERIOD LVG TIME BET 373	DETECTOR DETECTOR DETECTOR DETECTOR DETECTOR OTAL CORDS WITH NO WEEN 2-SI	RS R	32 6 2 0 0	546 4,714	14.3% 2.7% 0.9% 0.0% 0.0% 0.0%				
	rs	4 5 6 7 8 1 1ET 2-SEC RE 2-SEC PERIOD LVG TIME BET 373	DETECTOR DETECTOR DETECTOR DETECTOR OTAL CORDS WITH NO WEEN 2-SI	RS RS RS RS RS RS TH SORTS D SORTS EC SORTS	6 2 0 0	546 4,714	2.7% 0.9% 0.0% 0.0% 0.0%				
	rs	5 6 7 8 1 1ET 2-SEC RE 2-SEC PERIOO IVG TIME BET 373	DETECTOR DETECTOR DETECTOR OTAL CORDS WITH NO WEEN 2-SI	RS RS RS RS TH SORTS D SORTS EC SORTS	2 0 0 0	546 4,714	0.9% 0.0% 0.0% 0.0%				
	rs	6 7 8 T SET 2-SEC RE 2-SEC PERIOO NVG TIME BET 373	DETECTOR DETECTOR OTAL CORDS WITH NO WEEN 2-SI	RS RS RS TH SORTS D SORTS EC SORTS	0 0 0	546 4,714	0.0% 0.0% 0.0%				
	rs	7 8 T SET 2-SEC RE 2-SEC PERIOD NVG TIME BET 373	DETECTOR DETECTOR OTAL CORDS WI'S WITH NO WEEN 2-SI	RS RS TH SORTS D SORTS EC SORTS	0	546 4,714	0.0%				
	rs	8 T NET 2-SEC RE 2-SEC PERIOD NVG TIME BET 373	DETECTOR OTAL CORDS WITH NO WEEN 2-SI ACT_ND	RS TH SORTS D SORTS EC SORTS	0	546 4,714	0.0%				
	rs	T HET 2-SEC RE 2-SEC PERIOD AVG TIME BET 373	OTAL CORDS WI' S WITH NO WEEN 2-SI ACT_ND	TH SORTS O SORTS EC SORTS	-	546 4,714					
	rs	T HET 2-SEC RE 2-SEC PERIOD AVG TIME BET 373	OTAL CORDS WI' S WITH NO WEEN 2-SI ACT_ND	TH SORTS O SORTS EC SORTS		546 4,714					
	rs	HET 2-SEC RE R-SEC PERIOD AVG TIME BET 373	CORDS WI'S WITH NO WEEN 2-SI ACT_ND	O SORTS EC SORTS		4,714					
	rs	2-SEC PERIOD AVG TIME BET 373	S WITH NO WEEN 2-SI ACT_ND	O SORTS EC SORTS		4,714					
	rs	AVG TIME BET	WEEN 2-SI	EC SORTS			sec				
	rs	373	ACT_ND								
			-	III IMDED							
			-	NUMBEK	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
DETECT .	3UK 1 3	TREGA	(Bq)		(Bq/kg)			(Bq)	(#)		(kBq)
			(bq)	(")	(04) (3)			<b>1</b> - <b>1</b>			
	18	4.8%	-14000	1	-261			4000	112	14.5%	4
1	41		-12000	0				8000	337		8
2			-10000	0	-187			12000	100	13.0%	12
3	61			0	-149			16000	52	6.8%	16
4	55	14.7%	-8000	1	-112			20000	35	4.5%	20
5	55	14.7%	-6000		-75			24000	24	3.1%	24
6	66	17.7%	-4000	0				28000	19	2.5%	28
7	61	16.4%	-2000	0	-37			2000 32000	17	2.2%	32
8	16	4.3%	0	11	0 37			36000	11	1.4%	36
TOTAL	373		2000	17				40000	3	0.4%	40
		707	4000	35	75 113			44000 44000	7	0.9%	44
2-GATE SORT		397	6000	63	112					1.6%	48
	SORTS	FREQ%	8000	97				48000 53000	12 3	0.4%	52
8			10000	96				52000		0.1%	56
9	34	8.6%	12000	100	224			56000	1		60
10	57	14.4%	14000	55	261			60000	8	1.0%	
11	64	16.1%	16000	36				64000	3	0.4%	64
12	56	14.1%	18000	19				68000	5	0.6%	68
13	67	16.9%	20000	3				72000	2	0.3%	72
14	72	18.1%	22000	0	410			76000	2	0.3%	76
15	47	11.8%	24000	0	448			80000	2	0.3%	80
TOTAL	397		26000	0	485			84000	1	0.1%	84
			>28000	0	0			84000	14	1.8%	>84
			TOTAL	534				TOTAL	770		
SUMMARY TOT	TALS										
нот	PARTIC	LE EVENTS	773		SORTS BY	ONE G	ATE ONL	Y	373		
MULT	TIPARTI	CLE EVENTS	441		SORTS BY	TWO G	ATES		397		
DIST	TRIBUTE	D EVENTS	156								

#### REC CODE EXPLANATION

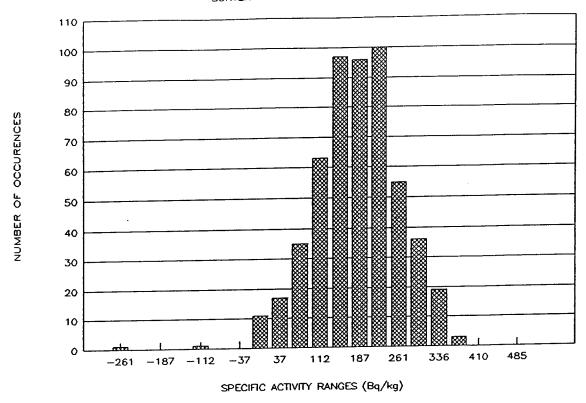
- 1.00 Source check (Soil on belt)
- 2.00 Empty belt

2-SEC COUNT PERIODS

3.00 Test (No process soil)

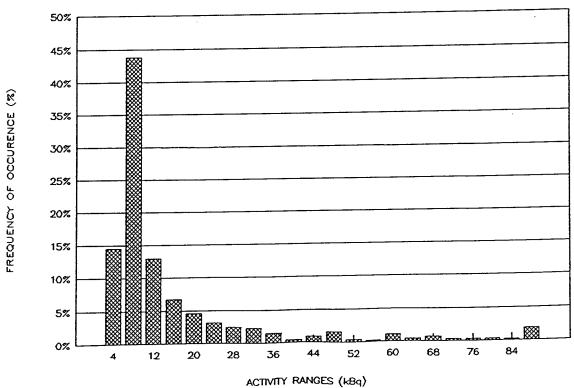
07:55

SORTER 1-LOG DATA FOR 20-Jon-93



# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 20-Jan-93



A-406

SORTER 2 20-Jan-93		-			
AVERAGE BACKGROUND COUNT RATE		0.79 ± 0.	04 c/sec		
SORTER SOIL DENSITY		1.15 tons/m³			
GROUND SOIL DENSITY		1.65 tons/m³			
droom sole benoti			CONTAMINATED	CLEAN	
MASS TOTAL			1.53 tons	26.5 tor	ns
MAXIMUM/SORT			53.6 kg	53.6 kg	
MINIMUM/SORT			0.7 kg	41.5 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY					94.5%
			1.21 yd³	21.0 yd³	
EQUIVALENT SOIL-IN-GROUND				2,777 7	
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	E)				
TOTAL			13,291 kBq		. •
MAXIMUM/SORT			456 kBq		
MINIMUM/SORT			2.7 k8q		
DISPERSED + PARTICLE (REALISTIC ES	TIMATE) ACTIV	'ITY	8,009 kBq	4,334 kBd	l
MAXIMUM/SORT			364 kBq	17 k8d	
MINIMUM/SORT			0 Bq	-7 kBc	I
SPECIFIC ACTIVITY			5,236 Bq/kg	164 Bq/	kg
WORK HISTORY				ac 70 bu	
WORK DAY START	07:00 AM		WORK DAY END	05:30 PM	
PLANT START-UP	07:00 AM		PLANT SHUT-DOWN	11:30 AM	
START SOIL PROCESSING	08:07 AM		END SOIL PROCESSING	0.5 hr	
LUNCH START	11:30 AM		LUNCH PERIOD	יווי כ.ט	
WORK HOURS			10.0 hr		
AVAILABLE HOURS			4.5 hr		
ACTUAL PROCESS HOU	RS (total 20-	sec records)	2.91 hr		
DOWN-TIME			1.59 hr		
TOTAL SYSTEM PAUSE			1.21 hr		
NONAVAILABLE HOURS			5.5 hr		
START-UP			1.12 hr		
SHUT-DOWN			0.48 hr		
PLANT PERFORMANCE			64.6%		
PRODUCTIVITY			29.1%		
TOTAL SOIL PROCESSING RECORDS (2-S	EC and 20-SEC	)	1,284		
NONPROCESS RECORDS (Test, calibrat			13		
20-SEC PROCESS RECORDS	•		523		
TOTAL SORT			7 MD>0 & MND=0		
NO SORT			76 AD=0 & MD=0 8	MND>0	
SOME SORT			440 AD>0&0 <md<mnd< td=""><td>max&amp;MND<mndma< td=""><td>x</td></mndma<></td></md<mnd<>	max&MND <mndma< td=""><td>x</td></mndma<>	x
UNEXPLAINED RECORD	s		0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	0			UNEXPLAIN	PAUSE
AD=0 &	MD 0			TIME	TIME
AD<0 &	MD 0			None	06:53
ACT_P <5 kBq	211	27.7%			07:26

_		ncn1006				5,230						07:55
2	-SEC COUNT	SEC RECORDS	50	פדפ	-		(ACT F	>0 kBq)				
	2-	SEC RECORDS	S WITH DO	MIJ MITIMES	IN >1 DF1		_					
	2-				166		79.0%					
			DETECTOR		31		14.8%					
			DETECTOR		8		3.8%					
			DETECTOR				2.4%					
		=	DETECTOR		5		0.0%					
			DETECTOR		0 0		0.0%					
			DETECTOR		0		0.0%					
			DETECTOR	RS.	U	210						
			DTAL			551						
		T 2-SEC RE										
		SEC PERIOD				4,679						
	A\	VG TIME BET	WEEN 2-SI	EC SORTS		19.0	sec					
									CORT	FREQ%	ACT_P	
1-GATE	SORTS	395	ACT_ND		SPEC_A			ACT_P		FREWA	(kBq)	
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kbq)	
								4000	93	12.2%	4	
1	15	3.8%	-14000	0	-261				342	44.9%	8	
2	28	7.1%	-12000	0	-224			8000	107	14.1%	12	
3	63	15.9%	-10000	3	-187			12000	-,•	8.4%	16	
4	94	23.8%	-8000	0	-149			16000	64	4.9%	20	
5	104	26.3%	-6000	2	-112			20000	37		24	
6	57	14.4%	-4000	2	-75			24000	23	3.0% 1.7%	28	
7	31	7.8%	-2000	1	-37			28000	13	1.4%	<b>32</b>	
8	3	0.8%	0	20	0			32000	11	0.9%	36	
TOTAL	395		2000	20	37			36000	7	0.7%	40	
			4000	50				40000	5	0.7%	44	
2-GATE	SORTS	366	6000	52				44000	2 4	0.5%	48	
DETECTR		FREQ%	8000	94	149			48000		1.2%	52	
8			10000	105	187			52000	9	0.5%	56	
9	20	5.5%	12000	92				56000	4	0.3%	60	
10	42	11.5%	14000	59				60000	2		64	
11	83	22.7%	16000	27	299			64000	5	0.7%	68	
12	89	24.3%	18000	9	336			68000	4	0.5%	72	
13	68	18.6%	20000	0	373			72000	3			
14	46	12.6%	22000	0	410			76000	1	0.1%	76	
15	18	4.9%	24000	0	448			80000	1		80	
TOTAL	366		26000	0	485			84000	0		84	
	_		>28000	0	0			>84000	24	3.2%	>84	
			TOTAL	536				TOTAL	761			
SUMMARY	TOTALS											
	HOT PARTIC	LE EVENTS	754		SORTS BY			ILY	395			
		CLE EVENTS	1005		SORTS BY	TWO (	ATES		366			
	DISTRIBUTE		528									
REC COD	E EXPLANAT	ION		<b>L</b> alat								

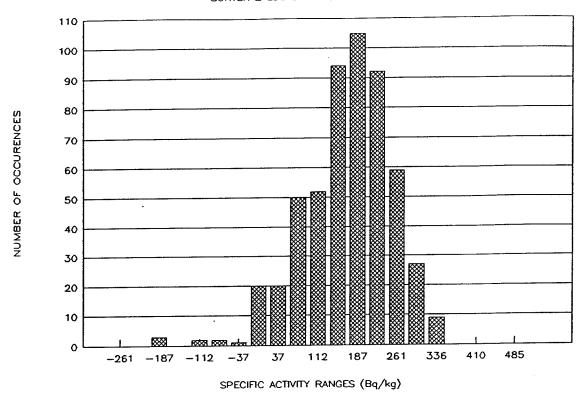
Printed on 01/22/93 at 10:34:47 AM

1.00 Source check (Soil on belt)

3.00 Test (No process soil)

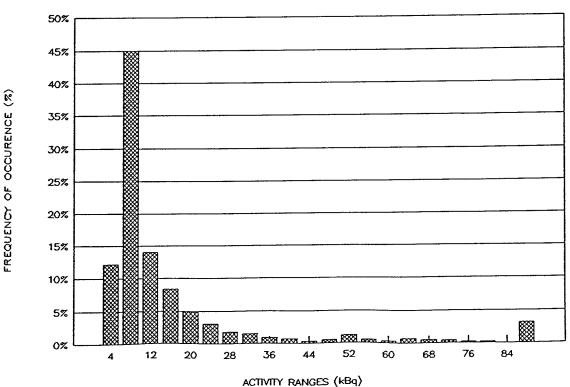
2.00 Empty belt

SORTER 2 LOG DATA FOR 20-Jan-93



## JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 20-Jon-93



A-409

corre 1 19-Jan-93				•
SORTER 1 19-Jan-93	•			
AVERAGE BACKGROUND COUNT RATE	0.71	.04 c/sec		
SORTER SOIL DENSITY	1.15 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m <sup>3</sup>	CONTAMINATED	CLEAN	
		3.58 tons	68.2 tons	
MASS TOTAL			53.6 kg	
MAXIMUM/SORT		53.6 kg 0.7 kg	43.5 kg	
MINIMUM/SORT		0.7 kg	43.3 kg	
WEIGHT RECOVERY OR VOLUME RECOVER	1			95.0%
EQUIVALENT SOIL-IN-GROUND		2.84 yd <sup>3</sup>	54.0 yd <sup>3</sup>	56.9 yd3/day
PARTICLE ACTIVITY (MAXIMUM ESTIMA	IF)			
		27,137 kBq		
TOTAL	•	568 kBq		
MAXIMUM/SORT		2.3 kBq		
MINIMUM/SORT				
DISPERSED + PARTICLE (REALISTIC E	STIMATE) ACTIVITY	13,083 kBq	12,522 kBq	
	3111112, 11013111	442 kBq	19 kBq	
MAXIMUM/SORT		0 Bq	-3 kBq	
MINIMUM/SORT  SPECIFIC ACTIVITY		3,655 Bq/kg	184 Bq/kg	Ī
SPECIFIC ACTIVITY				
WORK HISTORY	o7 00 44	WORK DAY END	05:30 PM	
WORK DAY START	07:00 AM	PLANT SHUT-DOWN	05:30 PM	
PLANT START-UP	07:00 AM	END SOIL PROCESSING	05:02 PM	
START SOIL PROCESSING	07:38 AM 11:30 AM	LUNCH PERIOD	0.5 hr	
LUNCH START	11:30 AM			
WORK HOURS		10.0 hr		
AVAILABLE HOURS		10.0 hr		
ACTUAL PROCESS HO	URS (total 20-sec records)	7.44 hr		
DOWN-TIME		2.56 hr		
TOTAL SYSTEM PAUS	Ε	2.57 hr		
NONAVAILABLE HOUR	S	0.0 hr		
START-UP		0.65 hr		
SHUT-DOWN		0.45 hr		
PLANT PERFORMANCE		74.4%		
PRODUCTIVITY		74.4%		
TOTAL SOIL PROCESSING RECORDS (2-	SEC and 20-SEC)	3,179		
NONPROCESS RECORDS (Test, calibra		4		
20-SEC PROCESS RECORDS		1,339		
TOTAL SORT		31 MD>0 & MND=0		
NO SORT		359 AD=0 & MD=0 8		
SOME SORT		949 AD>0&0 <md<mn< td=""><td>Dmax&amp;MND<mndmax< td=""><td></td></mndmax<></td></md<mn<>	Dmax&MND <mndmax< td=""><td></td></mndmax<>	
UNEXPLAINED RECOR	OS	0		DAUCE
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		UNEXPLAIN	PAUSE
AD=0 8	MD 0		TIME	TIME
AD<0 8	MD 0		None	07:02 10:15

1,840 (ACT\_P >0 kBq)

13,390

		Z SEC RECORD	J #1111 J	01.13		.,	1			
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR				
		2	DETECTO	RS	433	82.5%				
		3	DETECTO	RS	76	14.5%				
		4	DETECTO	RS	13	2.5%				
		5	DETECTO	RS	3	0.6%				
		6	DETECTO	RS	0	0.0%				
		7	DETECTO	RS	0	0.0%				
		8	DETECTO	RS	0	0.0%				
		τ	OTAL			525				
		NET 2-SEC RE	CORDS WI	TH SORTS		1,315				
		2-SEC PERIOD	S WITH N	O SORTS		12,075	`			
		AVG TIME BET	WEEN 2-S	EC SORTS		20.4 sec				
	:									
1-GATE S	ORTS	936	ACT_ND		SPEC_A		ACT_P		FREQX	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(Bq)	(#)		(kBq)
1	24	2.6%	-14000	0	-261		4000	296	16.1%	4
2	92	9.8%	-12000	0			8000	731		8
3	111		-10000	1			12000	285		12
4	132	14.1%	-8000	0	-149		16000	138		16
5	180	19.2%	-6000	1	-112		20000	85	4.6%	20
6	182	19.4%	-4000	0	-75		24000	56		24
7	154	16.5%	-2000	2	-37		28000	52		28
8	61	6.5%	0	41	0		32000	30	1.6%	32
TOTAL	936		2000	26	37		36000	24	1.3%	36
			4000	64	75		40000	16	0.9%	40
2-GATE S	ORTS	904	6000	128	112		44000	17	0.9%	44
DETECTR	SORTS	FREQ%	8000	201	149		48000	16	0.9%	48
8			10000	300	187		52000	12	0.7%	52
9	57	6.3%	12000	227	224		56000	14	0.8%	56
10	108	11.9%	14000	174	261		60000	7	0.4%	60
11	122	13.5%	16000	114	299		64000	6	0.3%	64
12	143	15.8%	18000	49	336		68000	3	0.2%	68
13	201	22.2%	20000	15	373		72000	7	0.4%	72
14	148	16.4%	22000	0	410		76000	4	0.2%	76
15	125	13.8%	24000	0	448		80000	3	0.2%	80
TOTAL	904		26000	0	485		84000	5	0.3%	84
			>28000	0	0	>	84000	33	1.8%	>84
			TOTAL	1343			TOTAL	1840		
SUMMARY	TOTALS									
H	OT PARTI	CLE EVENTS	1807			ONE GATE ONL	.Υ	936		
M	ULTIPARI	ICLE EVENTS	1220		SORTS BY	TWO GATES		904		

#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

2.00 Empty belt

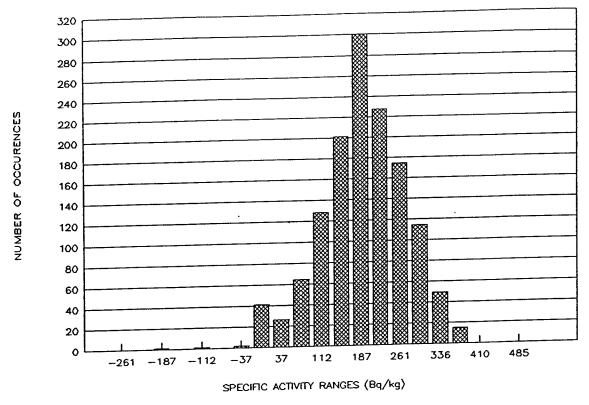
DISTRIBUTED EVENTS 2324

2-SEC COUNT PERIODS

2-SEC RECORDS WITH SORTS

3.00 Test (No process soil)

SORTER 1\_LOG DATA FOR 19-Jan-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 19-Jan-93

45% 40% 35% FREQUENCY OF OCCURENCE (%) 30% 25% 20% 15% 10% 5% 0% 76 68 52 60 28 12 20 4

ACTIVITY RANGES (KBq)

A-412

SORTER 2 19-Jan-93		-			
AVERAGE BACKGROUND COUNT RATE		0.79 ±	0.04 c/sec		
SORTER SOIL DENSITY		1.15 tons/m <sup>3</sup>			
GROUND SOIL DENSITY		1.65 tons/m³			
			CONTAMINATED	CLEAN	
MASS TOTAL			<b>3.95</b> tons	67.8 to	ns
MAXIMUM/SORT			53.6 kg	53.6 kg	
MINIMUM/SORT			0.7 kg	42.8 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY	•			e 1	94.5%
EQUIVALENT SOIL-IN-GROUND			3.13 yd <sup>3</sup>	53.7 yd	56.9 yd3/day
COTINAT					
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	E)		30,272 kBq		
TOTAL			785 kBq		
MAXIMUM/SORT			2.3 kBq		
MINIMUM/SORT			2.3 KBY		
DISPERSED + PARTICLE (REALISTIC ES	TIMATE) ACTIV	ITY	15,274 k8q	10,170 kB	1
MAXIMUM/SORT	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	•••	513 kBq	19 kBd	
MINIMUM/SORT			0 Bq	-12 kBd	· 1
SPECIFIC ACTIVITY			3,863 Bq/kg	150 Bg,	*
Security Addition				·	
WORK HISTORY					
WORK DAY START	07:00 AM		WORK DAY END	05:30 PM	
PLANT START-UP	07:00 AM		PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	07:38 AM		END SOIL PROCESSIN	G 05:03 PM	
LUNCH START	11:30 AM		LUNCH PERIOD	0.5 hr	
WORK HOURS			10.0 hr		
AVAILABLE HOURS			10.0 hr		
ACTUAL PROCESS HOU	RS (total 20-	sec records)	7.44 hr		
DOWN-TIME			2.56 hr		
TOTAL SYSTEM PAUSE			2.58 hr		
NONAVAILABLE HOURS			0.0 hr		
START-UP			0.65 hr		
SHUT-DOWN			0.45 hr		
PLANT PERFORMANCE			74.4%		
PRODUCTIVITY			74.4%		
TOTAL SOIL PROCESSING RECORDS (2-S	FC and 20-SEC	١	3,190		
NONPROCESS RECORDS (Test, calibrat		,	3		
20-SEC PROCESS RECORDS	,,		1,339		
TOTAL SORT			32 MD>0 & MND=	)	
NO SORT			308 AD=0 & MD=0		
SOME SORT			999 AD>0&0 <md<m< td=""><td></td><td>эх</td></md<m<>		эх
UNEXPLAINED RECORD	s		0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	2		•	UNEXPLAIN	PAUSE
AD=0 & 1				TIME	TIME
AD<0 &				13:49:12	07:02
ACT_P <5 kBq	544	29.4%		14:22:52	10:15
VOI_1 -2 10-4					

2-	SEC COL	INT PERIODS				13,390					
•	020 020	2-SEC RECORD	S WITH SO	ORTS	-	1,851	(ACT_P	>0 kBq)			
		2-SEC RECORD	S WITH PO	SITIVES	IN >1 DE	TECTOR					
			DETECTOR		417		78.4%				
		3	DETECTOR	RS	93		17.5%				
			DETECTOR		19		3.6%				
			DETECTOR		3		0.6%				
		6	DETECTOR	RS	0		0.0%				
			DETECTOR		0		0.0%				
		8	DETECTOR	RS	0		0.0%				
			OTAL			532					
		NET 2-SEC RE	CORDS WIT	TH SORTS		1,319					
		2-SEC PERIOD				12,071					
		AVG TIME BET				20.3	sec				
1-GATE SO	DRTS	927	ACT_ND	NUMBER	SPEC_A			ACT_P		FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)
DETECTA			•								
1	36	3.9%	-14000	0	-261			4000	248	13.4%	4
2	129	13.9%	-12000	0	-224			8000	790	42.7%	8
3	127	13.7%	-10000	1	-187			12000	297	16.0%	12
4	170	18.3%	-8000	0	-149			16000	145	7.8%	16
5	165	17.8%	-6000	2	-112			20000	70	3.8%	20
6	167	18.0%	-4000	1	-75			24000	51	2.8%	24
7	110		-2000	6	-37			28000	28	1.5%	28
8	23	2.5%	0	59	0			32000	29	1.6%	32
TOTAL	927		2000	82	37			36000	35	1.9%	36
			4000	123	75			40000	15	0.8%	40
2-GATE S	ORTS	924	6000	191	112			44000	12	0.6%	44
DETECTR	SORTS	FREQ%	8000	270	149			48000	17	0.9%	48
8			10000	225	187			52000	6	0.3%	52
9	87	9.4%	12000	179	224			56000	12	0.6%	56
10	106	11.5%	14000	<del>9</del> 8	261			60000	13	0.7%	60
11	163		16000	60	299			64000	5	0.3%	64
12	172	18.6%	18000	37	336			68000	9	0.5%	68
13	176		20000	8	373			72000	3	0.2%	72
14	152		22000	0	410			76000	7	0.4%	76
15	68	*	24000	0	448			80000	5	0.3%	80
TOTAL	924		26000	0	485			84000	2	0.1%	84
			>28000	0	0		>	84000	52	2.8%	>84

SUMMARY TOTALS

927 SORTS BY ONE GATE ONLY 1821 HOT PARTICLE EVENTS 924 SORTS BY TWO GATES 1700 MULTIPARTICLE EVENTS 2390 DISTRIBUTED EVENTS

1342

#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

TOTAL

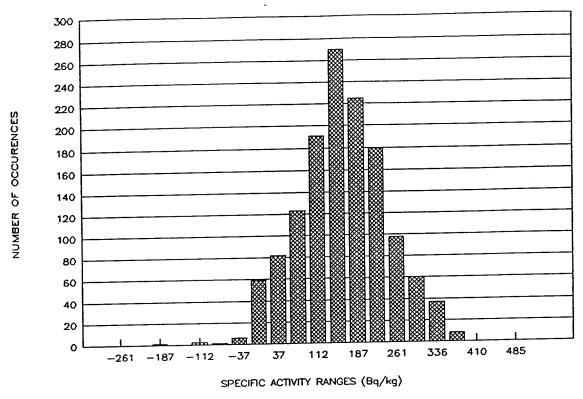
2.00 Empty belt

3.00 Test (No process soil)

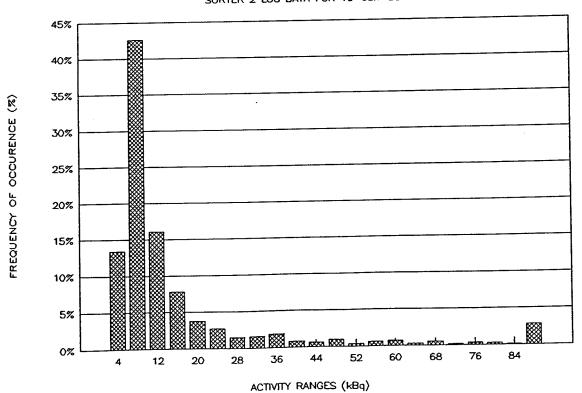
1851

TOTAL

SORTER 2 LOG DATA FOR 19-Jon-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 19-Jan-93



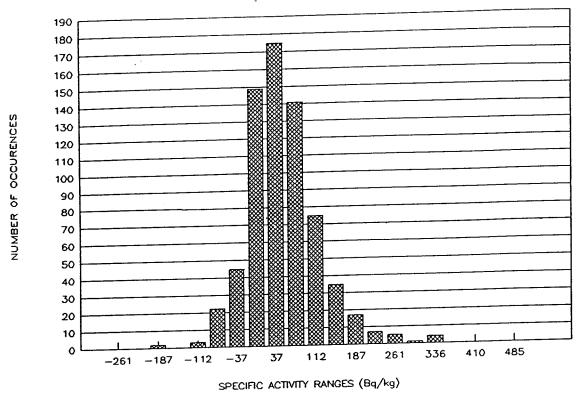
SORTER 1 18-Jan-93					
AVERAGE BACKGROUND COUNT RATE		0.69 ±	0.03 c/sec		
SORTER SOIL DENSITY		1.15 tons/	n-«		
GROUND SOIL DENSITY		1.65 tons/	TKK		
			CONTAMINATED	CLEAN	
MASS TOTAL			0.14 tons	35.1 to	ons
MAXIMUM/SORT			4 kg	53.6 kg	l
MINIMUM/SORT			0.7 kg	49.5 kg	!
WEIGHT RECOVERY OR VOLUME RECOVERY	,				99.6%
EQUIVALENT SOIL-IN-GROUND			0.11 yd«	27.8 yd	« 28.0 yd«/day
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	E)				
TOTAL			1,321 kBq		
MAXIMUM/SORT			60 kBq	•	
·			2.3 kBq		
MINIMUM/SORT			'''		
DISPERSED + PARTICLE (REALISTIC ES	TIMATE) ACTIVI	ΤΥ	675 kBq	1,153 kB	q
MAXIMUM/SORT		• •	48 kBq	18 kB	q
MINIMUM/SORT			0 Bq	-7 k8	q
SPECIFIC ACTIVITY			4,802 Bq/kg	33 Bq	/kg
LIONY HISTORY					
WORK HISTORY	07:00 AM		WORK DAY END	05:30 PM	
WORK DAY START	07:00 AH		PLANT SHUT-DOW		
PLANT START-UP	07:00 AM 01:16 PM		END SOIL PROCES		
START SOIL PROCESSING LUNCH START	11:30 AM		LUNCH PERIOD	0.5 hr	
			10.0	hr	
WORK HOURS			10.0		
AVAILABLE HOURS	00 (4 4-1 20 -				
ACTUAL PROCESS HOU	KS (total Zu-se	ec records)	6.34		
DOWN-TIME			5.89		
TOTAL SYSTEM PAUSE			0.0		
NONAVAILABLE HOURS			6.28		
START-UP			0.50		
SHUT-DOWN			36.65		
PLANT PERFORMANCE PRODUCTIVITY			36.62		
TOTAL SOIL PROCESSING RECORDS (2-S	EC and 20-SEC		764		
NONPROCESS RECORDS (Test, calibrat			24		
20-SEC PROCESS RECORDS	, on, etc)		658		
TOTAL SORT			0 MD>0 & F	IND=0	
NO SORT			527 AD=0 & M		
SOME SORT			131 AD>0&0∢	AD <mndmax&mnd<mndm< td=""><td>ax</td></mndmax&mnd<mndm<>	ax
UNEXPLAINED RECORD	S		0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	0			UNEXPLAIN	PAUSE
AD=0 &	_			TIME	TIME
AD<0 & 8	_			None	07:24
ACT_P <5 kBq		26.4%			08:42

	2-SEC	COU	NT PERIODS				6,580					08:51
			2-SEC RECORD	S WITH S	ORTS	-		(ACT P >0 kt	3 <b>q</b> )			08:57
			2-SEC RECORD			IN >1 DE	TECTOR	_	·			09:31
				DETECTO		23		88.5%				16:04
				DETECTO		3		11.5%				
				DETECTO		0		0.0%				
				DETECTO		0		0.0%				
				DETECTO		0		0.0%				
				DETECTO		0		0.0%				
				DETECTO		0		0.0%				
				OTAL			26					
			NET 2-SEC RE		TH SORTS		80					
			2-SEC PERIOD	S WITH N	O SORTS		6,500					
			AVG TIME BET				164.5	sec				
		•										
1-GATE	SORTS		56	ACT ND	NUMBER	SPEC_A		ACT P	SORT	FREQ%	ACT_P	
DETECT		RTS	FREQ%	(Bq)		(Bq/kg)		_ (Bq)	(#)		(kBq)	
1		3	5.3%	-14000	0	-261		4000	14	13.1%	4	
. 2		4	7.0%	-12000	0	-224		8000	43	40.2%	8	
3		9		-10000	2	-187		12000	18	16.8%	12	
4	•	8	14.0%	-8000	0	-149		16000	10	9.3%	16	
5		16	28.1%	-6000	3	-112		20000	5	4.7%	20	
6		8	14.0%	-4000	22	-75		24000	4	3.7%	24	
7		8	14.0%	-2000	45	-37		28000	1	0.9%	28	
8	3	1	1.8%	0	149	0		32000	2	1.9%	32	
TOTAL		57		2000	175	37		36000	2	1.9%	36	
				4000	141	75		40000	0	0.0%	40	
2-GATE	SORTS		50	6000	75	112		44000	0	0.0%	44	
DETECT	R SOF	RTS .	FREQ%	8000	35	149		48000	1	0.9%	48	
8	<b>,</b>			10000	17	187		52000	2	1.9%	52	
9	•	3	6.0%	12000	7	224		56000	2	1.9%	56	
10		5	10.0%	14000	5	261		60000	1	0.9%	60	
11		6.	12.0%	16000	1	299		64000	1	0.9%	64	
12		14	28.0%	18000	4	336		68000	0	0.0%	68	
13		11	22.0%	20000	0	373		72000	0	0.0%	72	
14		8	16.0%	22000	0	410		76000	0	0.0%	76	
15		3	6.0%	24000	0	448		80000	0	0.0%	80	
TOTAL		50		26000	0	485		84000	0	0.0%	84	
				>28000	0	0		>84000	1	0.9%	>84	
				TOTAL	681			TOTAL	107			
SUMMAR	Y TOTAL	.s										
	HOT PA	RTIC	LE EVENTS	107		SORTS BY	ONE GA	TE ONLY	56			
	MULTIP	ARTI	CLE EVENTS	101		SORTS BY	TWO GA	TES	50			
	DISTRI	BUTE	D EVENTS	0								

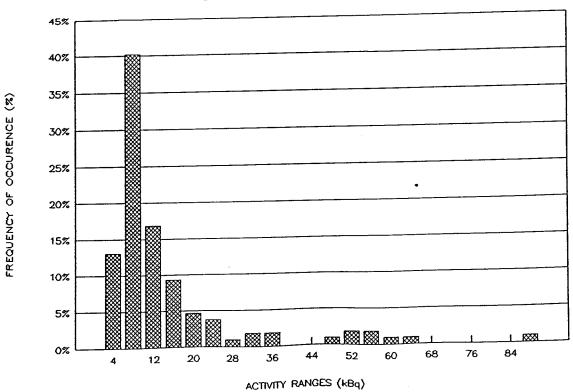
#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 1 LOG DATA FOR 18-Jan-93



## JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 18-Jan-93



A-418

SORTER 2 18-Jan-93				
AVERAGE BACKGROUND COUNT RATE	0.78 ± 0	0.03 c/sec		
SORTER SOIL DENSITY	1.15 tons/m«	,		
GROUND SOIL DENSITY	1.65 tons/m<			
GROOND SOIL DENSITY		CONTAMINATED	CLEAN	
MASS TOTAL		0.18 tons	34.7 ton	s
MAXIMUM/SORT		4 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	49.5 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY				99.5%
EQUIVALENT SOIL-IN-GROUND		0.14 yd«	27.5 yd«	27.7 yd«/day
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	: <b>)</b>			
TOTAL	••	1,431 kBq		
MAXIMUM/SORT		65 kBq		
MINIMUM/SORT		2.8 kBq		
		•		
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTIVITY	809 kBq	1,313 kBq	
MAXIMUM/SORT		51 kBq	13 kBq	
MINIMUM/SORT		0 Bq	-7 kBq	
SPECIFIC ACTIVITY		4,443 Bq/kg	38 Bq/	kg
WORK HISTORY				
WORK DAY START	07:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	07:00 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	01:16 PM	END SOIL PROCESSING	04:58 PM	
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr	
WORK HOURS		10.0 hr		
AVAILABLE HOURS		10.0 hr		
ACTUAL PROCESS HOUR	S (total 20-sec records)	3.62 hr		
DOWN-TIME		6.38 hr		
TOTAL SYSTEM PAUSE		5.92 hr		
NONAVAILABLE HOURS		0.0 hr		
START-UP		6.28 hr		
SHUT-DOWN		0.53 hr		
PLANT PERFORMANCE		36.2% 36.2%		
PRODUCTIVITY		30.2%		
TOTAL SOIL PROCESSING RECORDS (2-SE	C and 20-SEC)	759		
NONPROCESS RECORDS (Test, calibrati	on, etc)	23		
20-SEC PROCESS RECORDS		651		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		484 AD=0 & MD=0 &		
SOME SORT		167 AD>0&0 <md<mn< td=""><td>)max&amp;MND<mndma:< td=""><td>K</td></mndma:<></td></md<mn<>	)max&MND <mndma:< td=""><td>K</td></mndma:<>	K
UNEXPLAINED RECORDS		0		DAUGE
0 <ad<1kbq &="" md="">0</ad<1kbq>	0 .		UNEXPLAIN	PAUSE
AD=0 & M			TIME	TIME
AD<0 & M			None	07:24
ACT_P <5 kBq	27 25.0%			08:42

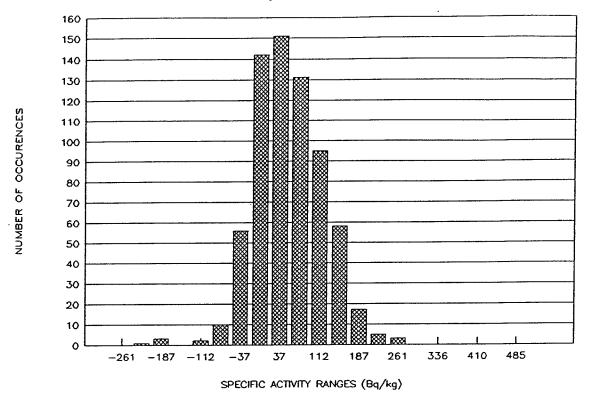
						<b>د د د</b> د د د د د د د د د د د د د د د د						08:
2-	SEC COUNT I	PERIODS				6,510	ACT P	>0 kBq)				08:
	2-51	EC RECORDS	WITH SOF	RTS			(,,,,,,	, 0 Kp4,				16:0
	2-5	EC RECORDS			(N > 1 DE 1	ECTOR	84.4%					
			DETECTORS		27		12.5%					
			DETECTORS		4		3.1%					
			DETECTOR		1		0.0%					
		5	DETECTOR	S	0							
		6	DETECTOR	S	0		0.0%					
		7	DETECTOR	S	0		0.0%					
		8	DETECTOR	S	0		0.0%					
			TAL			32						
	NET	2-SEC REC	CORDS WIT	H SORTS		76						
	2-9	SEC PERIODS	S WITH NO	SORTS		6,434						
	AVO	TIME BET	JEEN 2-SE	C SORTS		171.3	sec					
								ACT P	SORT	FREQ%	ACT_P	
-GATE S	ORTS	55	ACT_ND		SPEC_A			(Bq)	(#)		(kBq)	
ETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(104)	,		•	
				^	-261			4000	15	13.9%	4	
1	1	1.8%	-14000	0				8000	43	39.8%	8	
2	9	16.4%	-12000	1	-224			12000	12	11.1%	12	
3	9	16.4%	-10000	3	-187			16000	14	13.0%	16	
4	8	14.5%	-8000	0	-149			20000	6	5.6%	20	
5	11	20.0%	-6000	2	-112			24000	4	3.7%	24	
6	12	21.8%	-4000	10	-75			28000	0	0.0%	28	
7	4	7.3%	-2000	56	-37			32000	2	1.9%	32	
8	1	1.8%	0	142				36000	2	1.9%	36	
TOTAL	55		2000	151	37			40000	1	0.9%	40	
			4000	131				44000	2	1.9%	44	
2-GATE	SORTS	53	6000	<b>9</b> 5					2		48	
ETECTR		FREQ%	8000	58				48000	1	0.9%	52	
8			10000	17				52000	0		56	
9	2	3.8%	12000	5	224			56000	2		60	
10	9	17.0%	14000	3	261			60000	1		64	
11	8	15.1%	16000	. 0	299			64000			68	
12	11	20.8%		0	336			68000	1		72	
13	14	26.4%		C				72000	0		76	
14	5	9.4%		C	410			76000	0		80	
15	4	7.5%		C				80000	0		84	
TOTAL	53		26000	(	485			84000	0		>84	
TOTAL	,,,		>28000	(	) 0			>84000	400		704	
			TOTAL	674	4			TOTAL	108	<b>S</b>		
SUMMARY	TOTALS							v	55	;		
	HOT PARTIC	LE EVENTS	112		SORTS B			MLT	53			
	MULTIPARTI		157		SORTS E	Y TWO	GATES		).	,		
	DISTRIBUTE		0									

#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

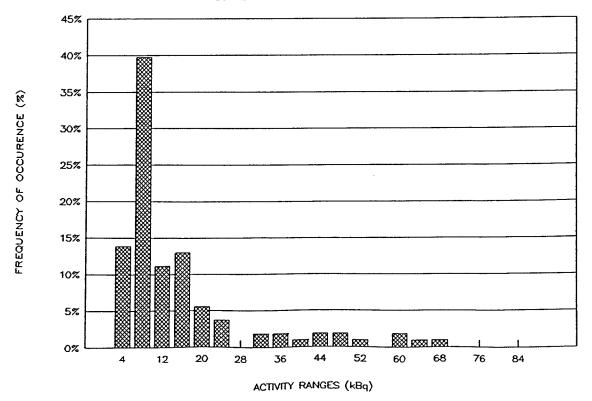
08:51

SORTER 2 LOG DATA FOR 18-Jon-93



## JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 18-Jan-93



<u>A-421</u>

SORTER 1 08-Jan-93				•
JOHNER	0.40 + 0.0	o3 c/sec		
AVERAGE BACKGROUND COUNT RATE	0.69 ± 0.0 1.15 tons/m³	,,, 0,000		
SORTER SOIL DENSITY	1.65 tons/m³			
GROUND SOIL DENSITY	1.83 (015/111	CONTAMINATED	CLEAN	
		0.54 tons	56.8 tons	
MASS TOTAL		6.7 kg	53.6 kg	
MAXIMUM/SORT		0.7 kg	46.9 kg	
MINIMUM/SORT		•		
DECOVERY				99.1%
WEIGHT RECOVERY OR VOLUME RECOVERY		0.43 yd3	45.0 yd3	45.5 yd3/day
EQUIVALENT SOIL-IN-GROUND				
CHAVINIM ESTIMAT	F)			
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	-,	7,380 kBq		
TOTAL		293 kBq		
MAXIMUM/SORT		2.4 kBq		
MINIMUM/SORT				
DISPERSED + PARTICLE (REALISTIC ES	TIMATE) ACTIVITY	3,301 kBq	4,160 kBq	
		243 kBq	14 kBq	
MAXIMUM/SORT		0 Bq	-10 kBq	
MINIMUM/SORT SPECIFIC ACTIVITY		6,157 Bq/kg	73 Bq/kg	
Specific Activity				
WORK HISTORY		LOOK DAY END	05:30 PM	
WORK DAY START	07:00 AM	WORK DAY END PLANT SHUT-DOWN	05:30 PM	
PLANT START-UP	07:00 AM	END SOIL PROCESSING		
START SOIL PROCESSING	08:03 AM	LUNCH PERIOD	0.5 hr	
LUNCH START	11:30 AM	LUNCH PERIOD		
101105		10.0 hr		
WORK HOURS		10.0 hr		
AVAILABLE HOURS	RS (total 20-sec records)	5.94 hr		
	ing (total 25 525 155	4.06 hr		
DOWN-TIME Total system pause	:	1.76 hr		
NONAVAILABLE HOURS		0.0 hr		
START-UP	•	1.06 hr		
SHUT-DOWN		2.18 hr		
PLANT PERFORMANCE		59.4%		
PRODUCTIVITY		59.4%		
		4 575		
TOTAL SOIL PROCESSING RECORDS (2-S	SEC and 20-SEC)	1,575		
NONPROCESS RECORDS (Test, calibrat	tion, etc)	9		
20-SEC PROCESS RECORDS		1,070 0 MD>0 & MND=0		
TOTAL SORT		694 AD=0 & MD=0		
NO SORT		376 AD>0&0 <md<mn< td=""><td></td><td></td></md<mn<>		
SOME SORT		0 80 5080 40 410	January House Control of the Control	
UNEXPLAINED RECORD		U	UNEXPLAIN	PAUSE
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		TIME	TIME
& 0=DA	_		None	07:35
& 0>dA				11:07
ACT_P <5 kBq	128 25.3%			

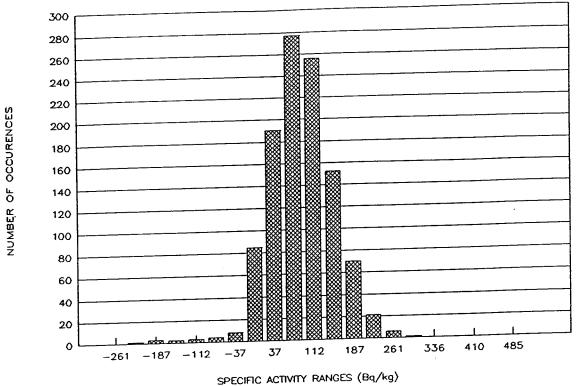
2-SEC CO	UNT PERIODS			10,700			
	2-SEC RECORDS WIT	H SORTS		505 (	(ACT_P >	) kBq)	
	2-SEC RECORDS WIT	H POSITIVES	IN >1 DE	TECTOR			
	2 DETE	CTORS	117	8	32.4%		
	3 DETE	CTORS	17	1	12.0%		
	4 DETE	CTORS	7		4.9%		
	5 DETE	CTORS	1		0.7%		
	6 DETE	CTORS	0		0.0%		
	7 DETE	CTORS	0		0.0%		
	8 DETE	CTORS	0		0.0%		
	TOTAL			142			
	NET 2-SEC RECORDS	WITH SORTS		363			
	2-SEC PERIODS WIT	H NO SORTS		10,337			
	AVG TIME BETWEEN	2-SEC SORTS		59.0 s	sec		
-GATE SORTS	250 ACT_	ND NUMBER	SPEC_A		ACT	[_ <b>P</b>	S
ETECTR SORTS	FREQ% (B	q) (#)	(Bq/kg)		(E	3q)	

1-GATE	SORTS	250	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECT	R SORTS	FREQ%	_ (Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	16	6.4%	-14000	0	-261	4000	49	9.7%	4
2	29	11.6%	-12000	1	-224	8000	220	43.6%	8
3	36	14.4%	-10000	3	-187	12000	73	14.5%	12
4	49	19.6%	-8000	2	-149	16000	48	9.5%	16
5	38	15.2%	-6000	3	-112	20000	26	5.1%	20
6	41	16.4%	-4000	4	-75	24000	18	3.6%	24
7	32	12.8%	-2000	8	-37	28000	10	2.0%	28
8	9	3.6%	0	85	0	32000	9	1.8%	32
TOTAL	250		2000	190	37	36000	9	1.8%	36
			4000	277	75	40000	5	1.0%	40
2-GATE	SORTS	255	6000	256	112	44000	3	0.6%	44
DETECT	R SORTS	FREQ%	8000	152	149	48000	9	1.8%	48
8			10000	70	187	52000	5	1.0%	52
9	24	9.4%	12000	21	224	56000	5	1.0%	56
10	34	13.3%	14000	6	261	60000	2	0.4%	60
11	48	18.8%	16000	1	299	64000	1	0.2%	64
12	44	17.3%	18000	0	336	68000	2	0.4%	68
13	42	16.5%	20000	0	373	72000	1	0.2%	72
14	43	16.9%	22000	0	410	76000	2	0.4%	76
15	20	7.8%	24000	0	448	80000	1	0.2%	80
TOTAL	255		26000	0	485	84000	0	0.0%	84
			>28000	0	0	>84000	7	1.4%	>84
			TOTAL	1079		TOTAL	505		
SUMMARY	Y TOTALS								
	HOT PARTI	CLE EVENTS	493		SORTS BY	ONE GATE ONLY	250		
	MULTIPART	ICLE EVENTS	308		SORTS BY	TWO GATES	255		
	DISTRIBUT	ED EVENTS	0						

#### REC CODE EXPLANATION

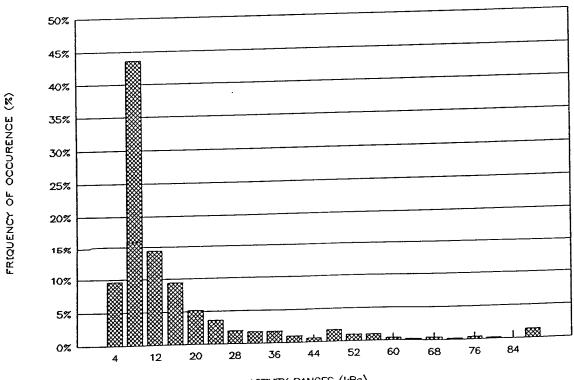
- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 1-LOG DATA FOR 08-Jan-93



### SPECIFIC ACITY TO TO COME (-1/1/15)

# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 08-Jon-93



ACTIVITY RANGES (kBq)

A-424

SORTER 2 08-Jan-93				
COUNT OFF	0.78 ± 0	).04 c/sec		
AVERAGE BACKGROUND COUNT RATE	1.15 tons/m³	7.04 0/300		
SORTER SOIL DENSITY	1.65 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m	CONTAMINATED	CLEAN	
		CONTAMINATED		_
MASS TOTAL		0.54 tons	57.0 tons	•
MAXIMUM/SORT		6.7 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	46.9 kg	•
WEIGHT RECOVERY OR VOLUME RECOVERY				99.1%
EQUIVALENT SOIL-IN-GROUND		0.43 yd <sup>3</sup>	45.2 yd³	45.6 yd3/day
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	E)			
TOTAL		8,593 kBq		
MAXIMUM/SORT		, 509 kBq		
MINIMUM/SORT		2.7 kBq		
DISPERSED + PARTICLE (REALISTIC ES	TIMATE) ACTIVITY	3,848 kBq	429 kBq	
MAXIMUM/SORT		408 kBq	15 kBq	
MINIMUM/SORT		0 Bq	-12 kBq	
SPECIFIC ACTIVITY		7,120 Bq/kg	8 Bq/k	g
				•
WORK HISTORY	07-00 44	WORK DAY END	05:30 PM	
WORK DAY START	07:00 AM	PLANT SHUT-DOWN	05:30 PM	
PLANT START-UP	07:00 AM	END SOIL PROCESSING		
START SOIL PROCESSING	08:03 AM	_	0.5 hr	
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 111	
WORK HOURS		10.0 hr		
AVAILABLE HOURS		10.0 hr		
	RS (total 20-sec records)	5.96 hr		
DOWN-TIME	•	4.04 hr		
TOTAL SYSTEM PAUSE		1.76 hr		
NONAVAILABLE HOURS		0.0 hr		
START-UP	•	1.06 hr		
SHUT-DOWN		2.18 hr		
PLANT PERFORMANCE		59.6%		
PRODUCTIVITY		59.6%		
TOTAL SOIL PROCESSING RECORDS (2-S	EC and 20-SEC)	1,576		
NONPROCESS RECORDS (Test, calibrat	ion, etc)	6		
20-SEC PROCESS RECORDS		1,073		
TOTAL SORT		0=DMM & 0 <dm 0<="" td=""><td></td><td></td></dm>		
NO SORT		672 AD=0 & MD=0 &		
SOME SORT		401 AD>0&0 <md<mn(< td=""><td>max&amp;MND</td><td></td></md<mn(<>	max&MND	
UNEXPLAINED RECORD	S	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	2		UNEXPLAIN	PAUSE
AD=0 & 6	мо 0		TIME	TIME
AD<0 &	MD 0		10:57:32	07:35
ACT_P <5 kBq	115 22.9%		13:37:52	11:07

Printed on 01/22/93 at 01:54:56 PM

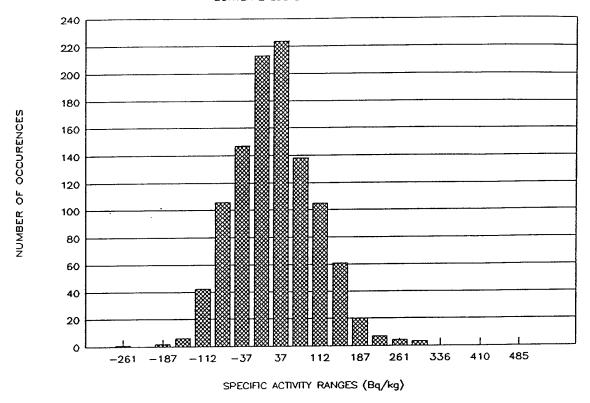
2-SEC COUNT PERIODS	10,73	60		
2-SEC RECORDS WITH SORTS	- 50	3 (ACT_P >0 kBq)		
2-SEC RECORDS WITH POSITIVES	IN >1 DETECTO	OR .		
2 DETECTORS	118	77.6%		
3 DETECTORS	29	19.1%		
4 DETECTORS	5	3.3%		
5 DETECTORS	0	0.0%		
6 DETECTORS	0	0.0%		
7 DETECTORS	0	0.0%		
8 DETECTORS	0	0.0%		
TOTAL	152			
NET 2-SEC RECORDS WITH SORTS	351			
2-SEC PERIODS WITH NO SORTS	10,379			
AVG TIME BETWEEN 2-SEC SORTS	61.1 sec			

4 6475 6/	ODTC	258	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
1-GATE SC		FREQ%	(Bq)		(Bq/kg)	(Bq)	(#)		(kBq)
DETECTR	SORTS	1114	(54)						
	10	3.9%	-14000	1	-261	4000	44	8.7%	4
1	35	13.6%	-12000	0	-224	8000	218	43.3%	8
2	39	15.1%	-10000	2	-187	12000	80	15.9%	12
3 4	45	17.4%	-8000	6	-149	16000	52	10.3%	16
5	55	21.3%	-6000	42	-112	20000	27	5.4%	20
6	37	14.3%	-4000	106	-75	24000	18	3.6%	24
7	31	12.0%	-2000	<b>447</b>	-37	28000	8	1.6%	28
8	6	2.3%	0	213	0	32000	8	1.6%	32
TOTAL	258	2.0.0	2000	224	37	36000	5	1.0%	36
TOTAL	230		4000	138	75	40000	5	1.0%	40
2-GATE S	OPTS	245	6000	105	112	44000	3	0.6%	44
DETECTR	SORTS	FREQ%	8000	61	149	48000	6	1.2%	48
DE 1EC 1 K	30813	1112-11	10000	20	187	52000	7		52
9	24	9.8%	12000	7	224	56000	4	0.8%	56
10	39	15.9%	14000	4	261	60000	2		60
11	38	15.5%	16000	3	299	64000	0		64
12	43	17.6%	18000	0	336	68000	5		68
13	49	20.0%	20000	0	373	72000	0	0.0%	72
14	28	11.4%	22000	0	410	76000	0	0.0%	76
• 15	24	9.8%	24000	0	448	80000	0	0.0%	80
TOTAL	245	,,,,,,,	26000	0	485	84000	0	0.0%	84
IUIAL	247		>28000	0	0	>84000	11	2.2%	>84
			TOTAL	1079		TOTAL	503		
CHMMADY	2 IATOL								
SUMMARY TOTALS  HOT PARTICLE EVENTS		486		SORTS BY	ONE GATE ONLY	258			
MULTIPARTICLE EVENTS		320		SORTS BY	TWO GATES	245			
DISTRIBUTED EVENTS		0							
υ	TOIKIDOIC	CILNIS	•						

#### REC CODE EXPLANATION

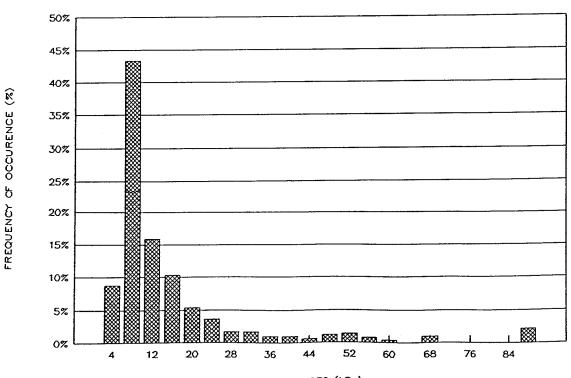
- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 08-Jan-93



## JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 08-Jan-93



ACTIVITY RANGES (kBq)

A-427

SORTER 1 07-Jan-93				
AVERAGE BACKGROUND COUNT RATE	0.70 ± 0.0	4 c/sec		
	1.15 tons/m³			
SORTER SOIL DENSITY	1.65 tons/m³			
GROUND SOIL DENSITY		CONTAMINATED	CLEAN	
		0.55 tons	75.5 tons	
MASS TOTAL		5.4 kg	53.6 kg	
MAXIMUM/SORT		0.7 kg	48.2 kg	
MINIMUM/SORT				
AND MOLENE DECOMEDY				99.3%
WEIGHT RECOVERY OR VOLUME RECOVERY		0.43 yd3	59.9 yd³	60.3 yd3/day
EQUIVALENT SOIL-IN-GROUND				
COLIMATE)				
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)		10,161 kBq		
TOTAL		1,456 kBq		
MAXIMUM/SORT		3.0 kBq		
MINIMUM/SORT				
FCT MAI	res activity	4,498 kBq	5,056 kBq	
DISPERSED + PARTICLE (REALISTIC ESTIMAT	IE) MCCIVITY	1056 kBq	15 k8q	
MAXIMUM/SORT		0 Bq	-8 kBq	
MINIMUM/SORT		8,202 Bq/kg	67 Bq/kg	·
SPECIFIC ACTIVITY		•		
WORK HISTORY		54V 54D	05:30 PM	
	:00 AM	WORK DAY END	05:30 PM	
	:00 AM	PLANT SHUT-DOWN		
	:07 AM	END SOIL PROCESSING	05:01 PM 0.5 hr	
	:30 AM	LUNCH PERIOD	U. J III	
		10 0 ha		
WORK HOURS		10.0 hr 10.0 hr		
AVAILABLE HOURS				
ACTUAL PROCESS HOURS (	total 20-sec records)	7,89 hr 2.11 hr		
DOWN-TIME				
TOTAL SYSTEM PAUSE		1.80 hr		
NONAVAILABLE HOURS		0.0 hr		
START-UP		1.13 hr		
SHUT-DOWN		0.47 hr		
PLANT PERFORMANCE		78.9%		
PRODUCTIVITY		78.9%		
TOTAL SOIL PROCESSING RECORDS (2-SEC a	and 20-SEC)	1,919		
TOTAL SOIL PROCESSING RECORDS (2 SEC 9	etc)	9		
NONPROCESS RECORDS (Test, calibration,	C.C.,	1,420		
20-SEC PROCESS RECORDS		0 MD>0 & MND=0		
TOTAL SORT		1,000 AD=0 & MD=0	8 MND>0	
NO SORT		420 AD>0&0 <md<mn< td=""><td>Dmax&amp;MND<mndmax< td=""><td></td></mndmax<></td></md<mn<>	Dmax&MND <mndmax< td=""><td></td></mndmax<>	
SOME SORT		0		
UNEXPLAINED RECORDS	1		UNEXPLAIN	PAUSE
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		TIME	TIME
AD=0 & MD	0		15:26:47	07:20
AD<0 & MD	141 28.3%			11:08
ACT_P <5 kBq	171 2015/8			

14,200

2-SEC RECORDS WITH SORTS - 499 (ACT\_P >0 kBq)

		2-SEC RECORD	S WITH S	SORTS	-	499 (ALI_	P >U KBQ.	,		
		2-SEC RECORD	S WITH P	POSITIVES	IN >1 DE					
		2	DETECTO	RS	115	83.9%	•			
		3	DETECTO	<b>X</b> S	16	11.72	<b>.</b>			
		4	DETECTO	RS	5	3.6%	3			
-		5	DETECTO	RS	1	0.7%	3			
		6	DETECTO	RS	0	0.0%				
		7	DETECTO	RS	0	0.0%				
		8	DETECTO	RS	0	0.0%	•			
			OTAL			137				
		NET 2-SEC RE				362				
		2-SEC PERIOD				13,838				
		AVG TIME BET	WEEN 2-S	SEC SORTS		78.5 sec				
1-GATE	SORTS	246	ACT_ND	NUMBER	SPEC_A		ACT_P	SORT	FREQ%	ACT_P
DETECT	R SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(Bq)	(#)		(kBq)
1	9	3.7%	-14000	0	-261		4000	51	10.2%	4
2			-12000	0			8000	227		8
3			-10000	1	-187		12000	82	16.4%	12
4			-8000	3	-149		16000	44	8.8%	16
5			-6000	4	-112		20000	22	4.4%	20
6		12.6%	-4000	11	-75		24000	8	1.6%	24
7			-2000	31	-37		28000	8	1.6%	28
8	16	6.5%	0	155	0		32000	4	0.8%	32
TOTAL			2000	263	37		36000	8	1.6%	<b>3</b> 6
			4000	384	75		40000	7	1.4%	40
2-GATE	SORTS	253	6000	282	112		44000	2	0.4%	44
DETECT	R SORTS	FREQ%	8000	150	149		48000	8	1.6%	48
8			10000	82	187		52000	6	1.2%	52
9	16	6.3%	12000	45	224		56000	4	0.8%	56
10	48	19.0%	14000	17	261	Ŧ	60000	1	0.2%	60
11	43	17.0%	16000	1	299		64000	3	0.6%	64
12	49	19.4%	18000	0	336		68000	2	0.4%	68
13	39	15.4%	20000	0	373		72000	1	0.2%	72
14	26	10.3%	22000	0	410		76000	0	0.0%	76
15	32	12.6%	24000	0	448		80000	0	0.0%	80
TOTAL	253		26000	0	485		84000	0	0.0%	84
			>28000	0	0	:	>84000	11	2.2%	>84
			TOTAL	1429			TOTAL	499		
SUMMARY	Y TOTALS							_		
	HOT PARTI	ICLE EVENTS	503			ONE GATE ON	LY	246		
		TICLE EVENTS	316		SORTS BY	TWO GATES		253		
	DISTRIBUT	TED EVENTS	0							

#### REC CODE EXPLANATION

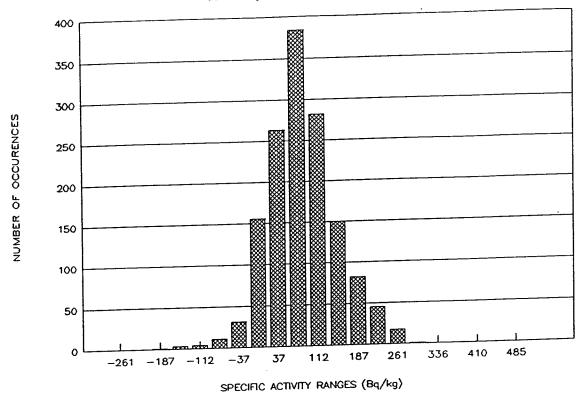
1.00 Source check (Soil on belt)

2.00 Empty belt

2-SEC COUNT PERIODS

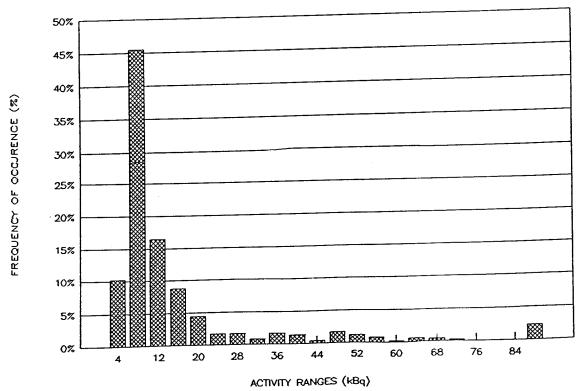
3.00 Test (No process soil)

SORTER 1 LOG DATA FOR 07-Jan-93



# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 07-Jan-93



A-430

SORTER 2 07-Jan-93	-			•
AVERAGE BACKGROUND COUNT RATE	0.76 ± 0	.06 c/sec		
SORTER SOIL DENSITY	1.15 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³			
		CONTAMINATED	CLEAN	
MASS TOTAL		0.38 tons	52.4 tons	
MAXIMUM/SORT		4 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	49.5 kg	
				00.74
WEIGHT RECOVERY OR VOLUME RECOVERY				99.3%
EQUIVALENT SOIL-IN-GROUND		0.30 yd <sup>3</sup>	41.5 yd³	41.8 yd3/day
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	E)			
. TOTAL		6,080 kBq		
MAXIMUM/SORT		327 kBq		
MINIMUM/SORT		2.8 kBq		
		2,749 kBq	9 kBq	
DISPERSED + PARTICLE (REALISTIC ES	TIMATE) ACTIVITY	2,749 kBq 230 kBq	16 kBq	
MAXIMUM/SORT		0 Bq	-15 kBq	
MINIMUM/SORT		7,297 Bq/kg	0 Bq/ks	3
SPECIFIC ACTIVITY		1,211 bd/kg		•
WORK HISTORY	07:00 AM	WORK DAY END	05:30 PM	
WORK DAY START	07:00 AM	PLANT SHUT-DOWN	05:30 PM	
PLANT START-UP START SOIL PROCESSING	08:07 AM	END SOIL PROCESSING	05:01 PM	
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr	
EURCH START	1122			
WORK HOURS		10.0 hr		
AVAILABLE HOURS		10.0 hr		
ACTUAL PROCESS HOU	RS (total 20-sec records)	5.47 hr		
DOWN-TIME		4.53 hr		
TOTAL SYSTEM PAUSE		4.20 hr		
NONAVAILABLE HOURS		0.0 hr		
START-UP		1.13 hr		
SHUT-DOWN		0.48 hr		
PLANT PERFORMANCE		54.7%		
PRODUCTIVITY		54.7%		
		1 700		
TOTAL SOIL PROCESSING RECORDS (2-S		1,308 12		
NONPROCESS RECORDS (Test, calibrat	ion, etc)	985		
20-SEC PROCESS RECORDS		0 MD>0 & MND=0		
TOTAL SORT		690 AD=0 & MD=0	R MND>0	
NO SORT		295 AD>0&0≪MD <mn< td=""><td></td><td></td></mn<>		
SOME SORT	¢	0		
UNEXPLAINED RECORD	S 0	v	UNEXPLAIN	PAUSE
0 <ad<1kbq &="" md="">0</ad<1kbq>	_		TIME	TIME
AD=0 & AD<0 &			None	07:20
	71 22.0%			11:08
ACT_P <5 kBq	22.04			

9,850 2-SEC COUNT PERIODS 323 (ACT\_P >0 kBq) 2-SEC RECORDS WITH SORTS 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR 81.8% 72 2 DETECTORS 15.9% 14 3 DETECTORS 2.3% 2 4 DETECTORS 0.0% 0 5 DETECTORS 0.0% 0 6 DETECTORS 0.0% 7 DETECTORS 0.0% 8 DETECTORS 88 TOTAL 235 NET 2-SEC RECORDS WITH SORTS 9,615 2-SEC PERIODS WITH NO SORTS 83.8 sec AVG TIME BETWEEN 2-SEC SORTS ACT\_P SORT FREQ% · ACT\_P NUMBER SPEC\_A ACT\_ND 156 1-GATE SORTS (kBq) (#) (Bq) (#) (Bq/kg) FREQ% (Bq) SORTS DETECTR 4 7.4% 24 4000 -261 7.1% -14000 1 11 8 134 41.5% 8000 -224 12.8% -12000 2 20 49 15.2% 12 12000 -187 0 12.8% -10000 20 3 16 9.9% 32 16000 -149 11 22.4% -8000 35 4. 20 5.9% 20000 19 -112 54 16.0% -6000 5 25 24 13 4.0% 24000 105 -75 -4000 16.0% 25 6 28 3.1% 10 28000 -37 189 -2000 10.3% 16 7 32 1.2% 4 32000 0 198 2.6% 0 4 8 36 4 1.2% 36000 37 2000 152 156 TOTAL 40 2 0.6% 40000 75 96 4000 0.6% 44 2 44000 86 112 6000 2-GATE SORTS 167 48 48000 5 1.5% 149 44 FREQ% 8000 DETECTR SORTS 52 3 0.9% 52000 26 187 10000 8 56 2 0.6% 56000 224 10.2% 12000 15 17 9 60 0.9% 3 60000 14000 8 261 8.4% 10 14 64 2 0.6% 64000 5 299 19.2% 16000 32 11 0.9% 68 3 68000 0 336 18000 34 20.4% 12 72 0.0% 0 72000 373 0 17.4% 20000 29 13 76 0.0% 0 76000 0 410 17.4% 22000 14 29 80 0.3% 80000 1 448 24000 0 7.2% 15 12 84 0 0.0% 84000 0 485 26000 167 TOTAL

SUMMARY TOTALS

156 SORTS BY ONE GATE ONLY HOT PARTICLE EVENTS 326 167 SORTS BY TWO GATES 236 MULTIPARTICLE EVENTS 0 DISTRIBUTED EVENTS

0

997

0

#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

>28000

TOTAL

- 2.00 Empty belt
- 3.00 Test (No process soil)

3.4%

11

323

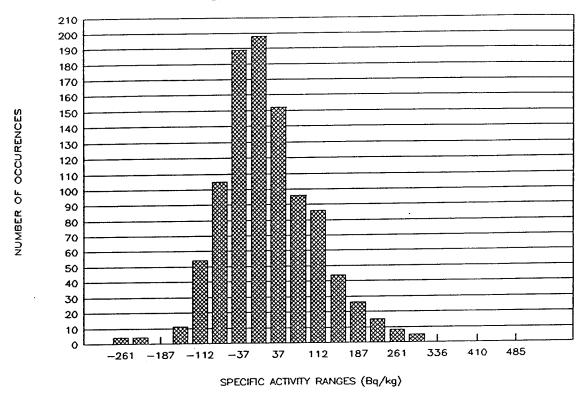
>84000

TOTAL

>84

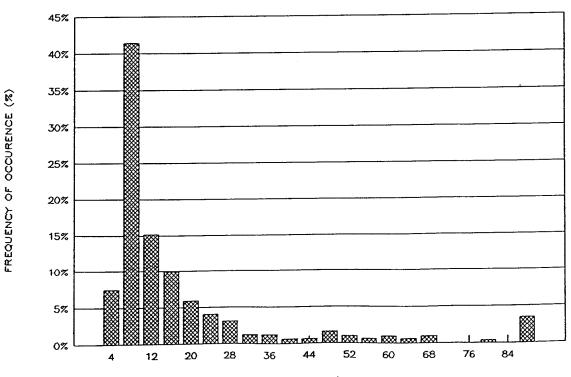
13:58

SORTER 2 LOG DATA FOR 07-Jan-93



# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 07-Jan-93



ACTIVITY RANGES (kBq)

A-433

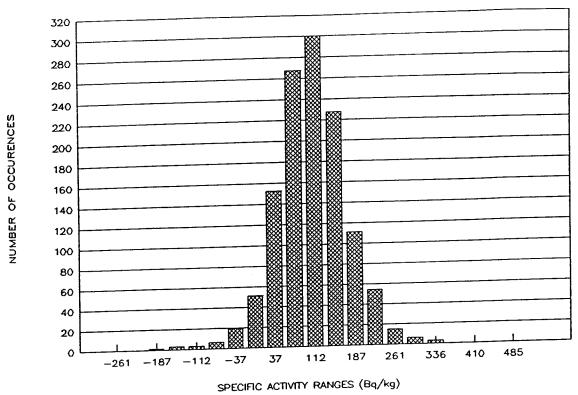
SORTER 1 06-Jan-93	-			•
AVERAGE BACKGROUND COUNT RATE	0.70 ± 0.0	03 c/sec		
SORTER SOIL DENSITY	1.15 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³			
		CONTAMINATED	CLEAN	
MASS TOTAL		0.87 tons	64.1 tons	
MAXIMUM/SORT		11.4 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	42.2 kg	
				98.7%
WEIGHT RECOVERY OR VOLUME RECOVERY		0.69 yd³	50.8 yd³	51.5 yd3/day
EQUIVALENT SOIL-IN-GROUND		0.07 /0	•	
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	E)			
TOTAL		14,142 kBq	,	
MAXIMUM/SORT	•	854 kBq		
MINIMUM/SORT		2.7 kBq		
		6.049 kBq	5,775 kBq	
DISPERSED + PARTICLE (REALISTIC ES	TIMATE) ACTIVITY	525 kBq	18 kBq	
MAXIMUM/SORT		0 Bq	-10 kBq	
MINIMUM/SORT		6,955 Bq/kg	90 Bq/kg	]
SPECIFIC ACTIVITY		0,755 04 115		
WORK HISTORY			or 70 pu	
WORK DAY START	07:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	07:00 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	07:55 AM	END SOIL PROCESSING		
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr	
WORK HOURS		10.0 hr		
AVAILABLE HOURS		10.0 hr		
	RS (total 20-sec records)	6.74 hr		
DOWN-TIME		3.26 hr		
TOTAL SYSTEM PAUSE		1.97 hr		
NONAVAILABLE HOURS		0.0 hr		
START-UP		0.93 hr		
SHUT-DOWN		1.54 hr		
PLANT PERFORMANCE		67.4%		
PRODUCTIVITY		67.4%		
	120 0503	2,036		
TOTAL SOIL PROCESSING RECORDS (2-S		5		
NONPROCESS RECORDS (Test, calibrat	ion, etc)	1,213		
20-SEC PROCESS RECORDS		0 MD>0 & MND=0		
TOTAL SORT		664 AD=0 & MD=0 &	WND>0	
NO SORT		547 AD>0&0 <md<mn< td=""><td></td><td></td></md<mn<>		
SOME SORT	e	2		
UNEXPLAINED RECORD	0	-	UNEXPLAIN	PAUSE
0 <ad<1kbq &="" md="">0</ad<1kbq>			TIME	TIME
AD=0 &			10:47:35	07:16
ad<0 & act_p <5 kbq	238 28.9%			09:59
WOI_E O WOOD				

	2-SEC COL	INT PERIODS				12,130						10:07
		2-SEC RECORD	S WITH S	ORTS	-	823	(ACT_P	>0 kBq)	)			11:09
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR						
		2	DETECTO	RS	187		79.2%					
		3	DETECTO	RS	42		17.8%					
		4	DETECTO	RS	6		2.5%					
		5	DETECTO	RS	1		0.4%					
		. 6	DETECTO	RS	0		0.0%					
		7	DETECTO	RS	0		0.0%					
		8	DETECTO	RS	0		0.0%					
		1	OTAL			236						
		NET 2-SEC RE	CORDS WI	TH SORTS		587						
		2-SEC PERIOD	S WITH N	O SORTS		11,543						
		AVG TIME BET	WEEN 2-S	EC SORTS		41.3	sec					
1-GATE	SORTS	411	ACT_ND	NUMBER	SPEC_A		1	ACT_P	SORT	FREQ%	ACT_P	
DETECTR	SORTS	FREQ%	(Bq)	(#)	(8q/kg)			(Bq)	(#)		(kBq)	
1	16	3.9%	-14000	0	-261			4000	109	13.2%	4	
2	57	13.9%	-12000	0	-224			8000	350	42.5%	8	
3	62	15.1%	-10000	1	-187		1	12000	123	14.9%	12	
4	63	15.3%	-8000	. 3	-149		•	16000	59	7.2%	16	
5	75	18.2%	-6000	3	-112		4	20000	44	5.3%	20	
6	70	17.0%	-4000	6	-75		7	24000	23	2.8%	24	
7	57	13.9%	-2000	19	-37		7	28000	26	3.2%	28	
8	11	2.7%	0	51	0		3	2000	5	0.6%	32	
TOTAL	411		2000	152	37		3	6000	7	0.9%	36	
			4000	267	75		4	0000	9	1.1%	40	
2-GATE	SORTS	412	6000	300	112		4	4000	10	1.2%	44	
DETECTR	SORTS	FREQ%	8000	227	149		4	8000	6	0.7%	48	
8			10000	111	187		5	2000	4	0.5%	52	
9	40	9.7%	12000	54	224		9	6000	6	0.7%	56	
10	62	15.0%	14000	15	261		•	0000	4	0.5%	60	
11	62	15.0%	16000	6	299		(	4000	4	0.5%	64	
12	64	15.5%	18000	3	336		•	8000	1	0.1%	68	
13	78	18.9%	20000	0	373		7	2000	6	0.7%	72	
14	74	18.0%	22000	0	410		7	6000	3	0.4%	76	
15	32	7.8%	24000	0	448		8	30000	4	0.5%	80	
TOTAL	412		26000	0	485		8	4000	0	0.0%	84	
			>28000	0	0		>8	34000	20	2.4%	>84	
			TOTAL	1218			1	OTAL	823			
SUMMARY	TOTALS											
	HOT PARTI	CLE EVENTS	809		SORTS BY	ONE G	ATE ONLY	,	411			
	MULTIPART	ICLE EVENTS	493		SORTS BY	TWO G	ATES		412			
I	DISTRIBUT	ED EVENTS	78									

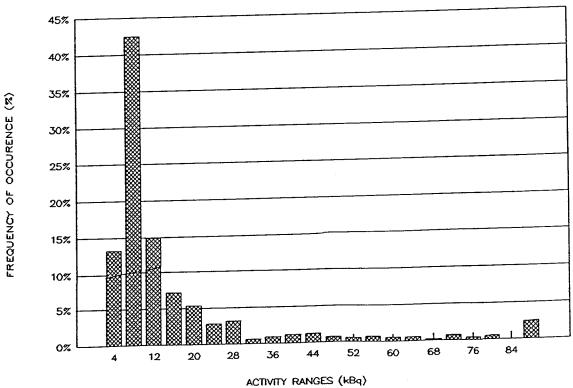
#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 1\_LOG DATA FOR 06-Jan-93



### JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 06-Jan-93



A-436

SORTER 2 06-Jan-93				
AVERAGE BACKGROUND COUNT RATE	0.79 ±	0.02 c/sec		
SORTER SOIL DENSITY	1.15 tons/m <sup>3</sup>	ı		
GROUND SOIL DENSITY	1.65 tons/m³	ı		
<b>3.00.</b> 00		CONTAMINATED	CLEAN	
MASS TOTAL		0.81 tons	64.1 tons	
MAXIMUM/SORT		8.7 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	44.9 kg	
				98.8%
WEIGHT RECOVERY OR VOLUME RECOVERY		0.64 yd³	50.8 yd3	51.5 yd³/day
EQUIVALENT SOIL-IN-GROUND		0.04 yu	30.0 /4	2102 / 2 / 2 /
CARLES ACTIVITY (MAYIMIM ECTIMATE	:			
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	.,	12,350 kBq		
TOTAL Maximum/sort		1,047 kBq		•
MINIMUM/SORT		2.8 kBq		
HINIHON/ SOK (		•		
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTIVITY	5,637 kBq	186 kBq	
MAXIMUM/SORT	-	825 kBq	11 kBq	
MINIMUM/SORT		0 Bq	-19 kBq	
SPECIFIC ACTIVITY		6,999 Bq/kg	3 Bq/k	9
WORK HISTORY				
WORK DAY START	07:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	07:00 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	07:55 AM	END SOIL PROCESSING		
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr	
		10 0 ha		
WORK HOURS		10.0 hr		
AVAILABLE HOURS		10.0 hr 6.73 hr		
	RS (total 20-sec records)	3.27 hr		
DOWN-TIME		1.97 hr		
TOTAL SYSTEM PAUSE		0.0 hr		
NONAVAILABLE HOURS		0.93 hr		
START-UP		1.55 hr		
SHUT-DOWN PLANT PERFORMANCE		67.3%		•
PRODUCTIVITY		67.3%		
PRODUCTIVITY				
TOTAL SOIL PROCESSING RECORDS (2-SE	EC and 20-SEC)	1,973		
NONPROCESS RECORDS (Test, calibrati		6		
20-SEC PROCESS RECORDS	•	1,212		
TOTAL SORT		0=DNM & 0 <dm 0<="" td=""><td></td><td></td></dm>		
NO SORT		696 AD=0 & MD=0 8		
SOME SORT		516 AD>080 <md<mn< td=""><td>omax&amp;MND<mndmax< td=""><td></td></mndmax<></td></md<mn<>	omax&MND <mndmax< td=""><td></td></mndmax<>	
UNEXPLAINED RECORDS	5	. 0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	1		UNEXPLAIN	PAUSE
AD=0 & 1	4D 0		TIME	TIME
AD<0 & 0	4D 0		09:37:56	07:16
ACT_P <5 kBq	172 22.6%			09:59

2-4	SEC COUNT	PER I OOS			1	2,120					10:0 11:0
2-3		EC RECORDS	S WITH SO	RTS	-	761	(ACT_P >0 kBq)				11:0
	2-5	EC RECORDS	S WITH PO	SITIVES	IN >1 DET	ECTOR					
			DETECTOR		183		79.9%				
			DETECTOR		36		15.7%				
			DETECTOR		8		3.5%				
			DETECTOR		2		0.9%				
			DETECTOR		0		0.0%				
			DETECTOR		0		0.0%				
		8	DETECTOR	RS	0		0.0%				
		Ţ	OTAL			229					
	NET	2-SEC RE		TH SORTS		532					
		SEC PERIOD			1	1,588					
		TIME BET				45.6	sec				
I-GATE SÒ	219	388	ACT_ND	NUMBER	SPEC_A		ACT_P		FREQ%	ACT_P	
ETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(Bq)	(#)		(kBq)	
EIELIK	SORTS	,	•							,	
1	25	6.4%	-14000	12	-261		4000	72	9.5%	4	
2	63	16.2%	-12000	4	-224		8000	325	42.7%	8	
3	57	14.7%	-10000	5	-187		12000	120	15.8%	12	
4	70	18.0%	-8000	12	- 149		16000	83	10.9%	16	
5	71	18.3%	-6000	22	-112		20000	27	3.5%	20	
6	63	16.2%	-4000	103	-75		24000	18	2.4%	24	
7	36	9.3%	-2000	168	-37		28000	20	2.6%	28	
8	3	0.8%	0	247	0		32000	19	2.5%	32	
TOTAL	388		2000	266	37		36000	14	1.8%	36	
TOTAL	300		4000	196	75		40000	6	0.8%	40	
2-GATE SC	DETS.	373	6000	102	112		44000	9	1.2%	44	
DETECTR	SORTS	FREQ%	8000	48	149		48000	5	0.7%	48 53	
8	•		10000	26	187		52000	7	0.9%	52	
9	47	12.6%	12000	7	224		56000	6	0.8%	56	
10	51	13.7%	14000	0	261		60000	8	1.1%	60	
11	60	16.1%	16000	0	299		64000	5	0.7%	64 48	
12	63	16.9%	18000	0	336		68000	4	0.5%	68 72	
13	75	20.1%	20000	0	373		72000	1	0.1%		
14	58	15.5%	22000	0	410		76000	2	0.3%	· 76	
15	19	5.1%	24000	0	448		80000	1		80 84	
TOTAL	373		26000	0	485		84000	0	0.0%		
			>28000	0	0		>84000	9	1.2%	>84	
			TOTAL	1218	i		TOTAL	761			
SUMMARY 1	TOTALS										
	OT PARTICE	E EVENTS	752				GATE ONLY	388			
		LE EVENTS	452		SORTS BY	TWO (	GATES	373			
		EVENTS	0								

#### REC CODE EXPLANATION

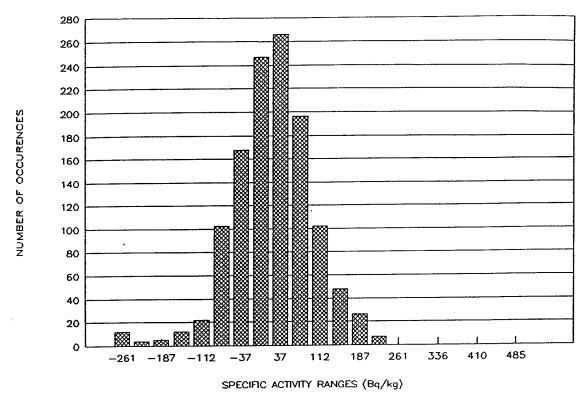
1.00 Source check (Soil on belt)

2.00 Empty belt

3.00 Test (No process soil)

2

SORTER 2 LOG DATA FOR 06-Jan-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 06-Jon-93

45% 40% 35% FREQUENCY OF OCCURENCE (%) 30% 25% 20% 15% 10% 5% 0% 84 12 20 28 36 44 68 76

ACTIVITY RANGES (kBq)
A-439

SORTER 1 05-Jan-93				•
	0.71 + 0.6	)3 c/sec		
AVERAGE BACKGROUND COUNT RATE	0.71 ± 0.0 1.15 tons/m³	,, ,,,,,,		
SORTER SOIL DENSITY				
GROUND SOIL DENSITY	1.65 tons/m³	CONTAMINATED	CLEAN	
		0.60 tons	70.0 tons	
MASS TOTAL		5.4 kg	53.6 kg	
MAXIMUM/SORT		0.7 kg	48.2 kg	
MINIMUM/SORT		0.7 kg	-	
				99.1%
WEIGHT RECOVERY OR VOLUME RECOVERY		0.48 yd³	55.5 yd³	55.9 yd3/day
EQUIVALENT SOIL-IN-GROUND		0.40 / 0		
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	)	7,850 kBq		
TOTAL		202 kBq		
MAXIMUM/SORT		2.4 kBq		
MINIMUM/SORT		2.4 404		
		3,577 kBq	4,760 kBq	
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTIVITY	186 kBq	18 kBq	
MAXIMUM/SORT		0 Bq	-9 kBq	
minimum/sort		5,924 Bq/kg	68 Bq/kg	
SPECIFIC ACTIVITY		3,724 043		
WORK HISTORY	a7 00 4W	WORK DAY END	05:30 PM	
WORK DAY START	07:00 AM	PLANT SHUT-DOWN	05:30 PM	
PLANT START-UP	07:00 AM	END SOIL PROCESSING	04:56 PM	
START SOIL PROCESSING	08:07 AM	LUNCH PERIOD	0.5 hr	
LUNCH START	11:30 AM	Control Control		
		10.0 hr		
WORK HOURS		10.0 hr		
AVAILABLE HOURS	RS (total 20-sec records)	7.32 hr		
	(3 (1014) 20 000 100	2.68 hr		
DOWN-TIME		2.87 hr		
TOTAL SYSTEM PAUSE		0.0 hr		
NONAVAILABLE HOURS		1.12 hr		
START-UP		0.55 hr		
SHUT-DOWN		73.2%	•	
PLANT PERFORMANCE		73.2%		
PRODUCTIVITY				
TOTAL SOIL PROCESSING RECORDS (2-S	EC and 20-SEC)	1,847		
TOTAL SOIL PROCESSING RECORDS (2-3	ion etc)	9		
NONPROCESS RECORDS (Test, calibrat	101, 610,	1,317		
20-SEC PROCESS RECORDS		0 MD>0 & MND=0		
TOTAL SORT NO SORT		876 AD=0 & MD=0		
NO SURT SOME SORT		441 AD>0&0 <md<mn< td=""><td>Dmax&amp;MND</td><td></td></md<mn<>	Dmax&MND	
UNEXPLAINED RECORD	s	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		UNEXPLAIN	PAUSE
AD=0 &	•		TIME	TIME
AD<0 & & 0.00			None	07:02
ACT_P <5 kBq	132 24.9%			11:06
ACI_F O KOG	•			

	2-SEC CC	OUNT PERIODS				13,170						16:57
	2 320 00	2-SEC RECORD	S WITH S	ORTS	-	•	(ACT P	>0 kBq)				
		2-SEC RECORD			IN >1 DE	ETECTOR	-					
			DETECTO		120		80.5%					
			DETECTO		27		18.1%					
		4	DETECTO	RS	2		1.3%					
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
		7	DETECTO	RS	0		0.0%					
		8	DETECTO	RS	0		0.0%					
		1	OTAL			149						
		NET 2-SEC RE	CORDS WI	TH SORTS		381						
		2-SEC PERIOD	S WITH N	O SORTS		12,789						
		AVG TIME BET	WEEN 2-S	EC SORTS		69.1	sec					
1-GATE	SORTS	269	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P	•
DETECT	R SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)	
1	14	5.2%	-14000	0	-261			4000	70		4	
2	41	15.2%	-12000	0	-224			8000	195	36.8%	8	
3	42	15.6%	-10000	2	-187			12000	95	17.9%	12	
4	45	16.7%	-8000	1	-149			16000	44	8.3%	16	
5	51	19.0%	-6000	2	-112			20000	23	4.3%	20	
6	38	14.1%	-4000	9	-75			24000	28	5.3%	24	
7	29	10.8%	-2000	36	-37			28000	13	2.5%	28	
8	9	3.3%	0	120	0			32000	7		32	
TOTAL	269	•	2000	261	37			36000	8	1.5%	36	
			4000	343	75			40000	5	0.9%	40	
2-GATE		261	6000	267	112			44000	6	1.1%	44	
DETECT		FREQ%	8000	170	149			48000	6	1.1%	48 52	
8			10000	59	187			52000	6	1.1%	52 56	
9			12000	35	224			56000	2	0.4%	60	
10			14000	15	261			60000 44000	2 4	0.4%	64	
11			16000	4	299 336			64000 68000	3		68	
12			18000	1	373			72000	4	0.8%	72	
13			20000 22000	0	410			76000	0	0.0%	76	
14			24000	0	448			80000	ō	0.0%	80	+ 5
15			26000	0	485			84000	1	0.2%	84	
TOTAL	261		>28000	0	400			84000	8	1.5%	>84	
				1326	J			TOTAL	530		•	
CIMMAN	V TOTALC		TOTAL	1320				IVIAL	220			
20MMAK	Y TOTALS	TOLE EVENTS	520		SORTS BY	ONE C	TE OUI	Y	269			
		ICLE EVENTS	520 382		SORTS BY			•	261			
		TICLE EVENTS TED EVENTS	0		JUN 13 B1	, HO W						
	DISTRIBU	I'LD EAEMIS	v									

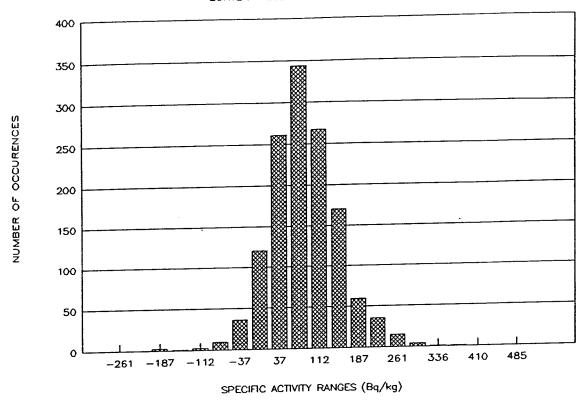
#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

2.00 Empty belt

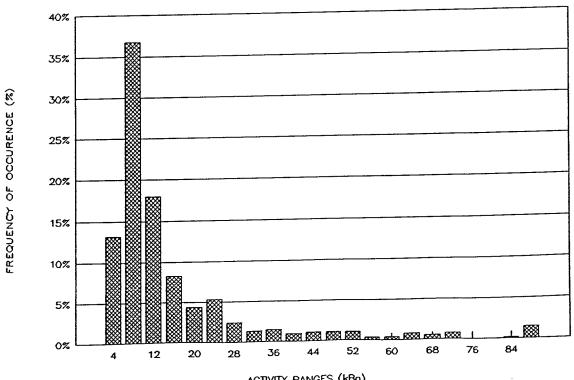
3.00 Test (No process soil)

SORTER 1-LOG DATA FOR 05-Jon-93



# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 05-Jan-93



ACTIVITY RANGES (kBq)

A-442

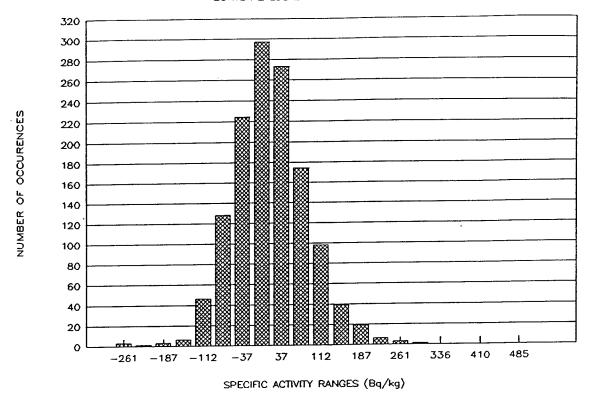
_					
SORTER 2 05-Ja	n-93	-			•
AVERAGE BACKGROUND COU	NT RATE	0.78 ± 0	0.04 c/sec		
SORTER SOIL DENSITY		1.15 tons/m <sup>3</sup>			
GROUND SOIL DENSITY		1.65 tons/m³			
			CONTAMINATED	CLEAN	
MASS TOTAL			0.63 tons	69.7 tons	
MAXIMUM/SORT			8 kg	53.6 kg	
MINIMUM/SORT			0.7 kg	45.5 kg	
	······ accovery				99.1%
WEIGHT RECOVERY OR VOL			0.50 yd³	55.2 yd³	55.7 yd3/day
EQUIVALENT SOIL-IN-GRO	UNU		0.50 /-	•	
PARTICLE ACTIVITY (MAX	THIM ECTIMATE)				
	THOM ESTITATES		8,406 kBq		
TOTAL		•	205 kBq		
MAXIMUM/SORT			2.7 kBq		
MINIMUM/SORT					
DISPERSED + PARTICLE (	DEALISTIC ESTIMATES	ACTIVITY	3,951 kBq	(197)kBq	
	NEMETOTIC COLLEGE)		154 kBq	14 k8q	
MAXIMUM/SORT			0 Bq	-12 kBq	
MINIMUM/SORT SPECIFIC ACTIVI	(TV		6,249 Bq/kg	(3)Bq/kg	
Sherilir Writat	11		• •		
WORK HISTORY					
WORK DAY START	07:00	AM	WORK DAY END	05:30 PM	
PLANT START-UP	07:00	AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROC	CESSING 08:07	AM	END SOIL PROCESSING		
LUNCH START	11:30	AM	LUNCH PERIOD	0.5 hr	
1007.1	IOI ID C		10.0 hr		
WORK I			10.0 hr		
	ABLE HOURS _ PROCESS HOURS (tota	20-sec records)	7.29 hr		
		( 20-366 16601437	2.71 hr		
DOWN-1	SYSTEM PAUSE		2.90 hr		
	AILABLE HOURS		0.0 hr		
START-			1.12 hr		
STAKT-			0.56 hr		
•	PERFORMANCE		72.9%		
	CTIVITY		72.9%		
TOTAL SOIL PROCESSING			1,841 9		
NONPROCESS RECORDS (Te	est, calibration, etc	)	_		
20-SEC PROCESS	RECORDS		1,312 0 MD>0 & MND=0		
TOTAL			0 = 0 = 0 = 0 = 0 = 0 = 0 = 0 = 0 = 0 =		
NO SOF	₹ <b>T</b>		474 AD>0&0 <md<mn< td=""><td></td><td></td></md<mn<>		
SOME S	SORT				
	LAINED RECORDS		0	UNEXDI ATU	PAUSE
>CA>0	1kBq & MD>0	1		UNEXPLAIN	TIME
	AD=0 & MD	0		TIME 09:09:05	07:02
	AD<0 & MD	0		07:07:03	11:04
ACT_P	<5 kBq 1	46 27.6%			

16:57 13,120 2-SEC COUNT PERIODS 529 (ACT\_P >0 kBq) 2-SEC RECORDS WITH SORTS 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR 78.9% 116 2 DETECTORS 16.3% 24 3 DETECTORS 4.1% 6 4 DETECTORS 0.7% 1 5 DETECTORS 0 0.0% 6 DETECTORS 0.0% 0 7 DETECTORS 0.0% 8 DETECTORS 147 TOTAL 382 NET 2-SEC RECORDS WITH SORTS 12,738 2-SEC PERIODS WITH NO SORTS 68.7 sec AVG TIME BETWEEN 2-SEC SORTS ACT\_P SORT FREQ% ACT\_P NUMBER SPEC\_A ACT\_ND 1-GATE SORTS 264 (#) (kBq) (Bq) (#) (Bq/kg) (Bq) FREQ% DETECTR SORTS 4 57 10.8% 4000 -261 3 8.0% -14000 21 1 232 43.9% 8 8000 -224 16.3% -12000 1 43 2 78 14.7% 12 12000 16.7% -10000 3 -187 3 44 6.8% 16 36 16000 -149 6 18.2% -8000 4 48 20 4.7% 25 20000 46 -112 -6000 16.3% 43 5 24 2.3% 12 24000 -75 -4000 128 12.9% 6 34 28 3.2% 17 28000 224 -37 -2000 9.5% 7 25 2.1% 32 11 32000 n 297 0 6 2.3% 8 36 1.3% 7 36000 37 273 2000 264 TOTAL 0.9% 40 5 40000 75 4000 174 44 1.3% 44000 98 112 6000 265 2-GATE SORTS 48 0.8% 48000 149 39 8000 FREQ% DETECTR SORTS 52 0.8% 52000 19 187 10000 8 1.5% 56 8 56000 224 12000 6 14.7% 9 39 60 2 0.4% 60000 261 3 37 14.0% 14000 10 0.4% 64 2 64000 299 22.3% 16000 59 11 68 0.6% 68000 336 0 18000 14.0% 12 37 72 0.2% 72000 1 373 0 20000 34 12.8% 13 76 0.0% 0 76000 410 14.7% 22000 39 14 80 0.0% 0 80000 448 7.5% 24000 0 20 15 84 0.4% 2 84000 485 26000 265 TOTAL 3.0% >84 16 >84000 0 >28000 0 TOTAL 529 1321 TOTAL SUMMARY TOTALS 264 SORTS BY ONE GATE ONLY 530 HOT PARTICLE EVENTS 265 SORTS BY TWO GATES 413 MULTIPARTICLE EVENTS 0 DISTRIBUTED EVENTS

#### REC CODE EXPLANATION

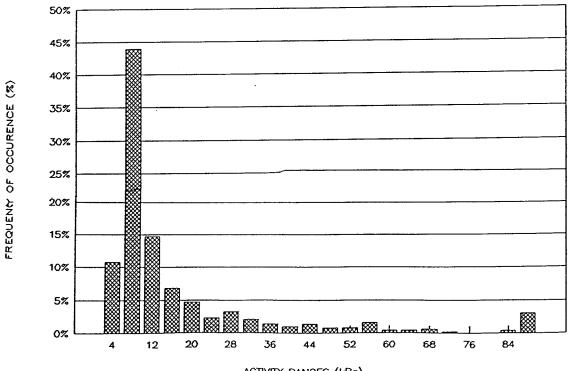
- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 2 LOG DATA FOR 05-Jon-93



# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 05-Jan-93



ACTIVITY RANGES (kBq)

A-445

SORTER 1 04-Jan-93				
AVERAGE BACKGROUND COUNT RATE	0.71 ± 0.	04 c/sec		
SORTER SOIL DENSITY	1.15 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³			
GROUND SOIL DEMOTION		CONTAMINATED	CLEAN	
MASS TOTAL		0.90 tons	73.2 tons	
MAXIMUM/SORT		9.4 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	44.2 kg	
FIZE ALIGNY COMP.				98.8%
WEIGHT RECOVERY OR VOLUME RECOVERY			50.0	58.7 yd³/day
EQUIVALENT SOIL-IN-GROUND		0.71 yd³	58.0 yd³	30.7 ya 7aay
EROTANCE				
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	)			
TOTAL		13,227 kBq		
MAXIMUM/SORT	•	329 kBq		
MINIMUM/SORT		2.0 kBq		
			4,952 kBq	
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTIVITY	5,821 kBq	16 kBq	
MAXIMUM/SORT		272 kBq	-7 kBq	
MINIMUM/SORT		0 Bq	68 Bq/kg	
SPECIFIC ACTIVITY		6,482 Bq/kg	00 04) 43	
WORK HISTORY		WORK DAY END	05:30 PM	
WORK DAY START	07:00 AM	PLANT SHUT-DOWN	05:30 PM	
PLANT START-UP	07:00 AM	END SOIL PROCESSING		
START SOIL PROCESSING	MA 80:80	LUNCH PERIOD	0.5 hr	
LUNCH START	11:30 AM	CONCH TERROD		
		10.0 hr		
WORK HOURS		10.0 hr		
AVAILABLE HOURS	S (total 20-sec records)	7.68 hr		
	3 (totat 20 3cc / cco. Ls,	2.32 hr		
DOWN-TIME TOTAL SYSTEM PAUSE		2.21 hr		
NONAVAILABLE HOURS		0.0 hr		
		1.14 hr		
START-UP		0.53 hr		
SHUT-DOWN PLANT PERFORMANCE		76.8%		
PRODUCTIVITY		76.8%		
FR.0000111111				
TOTAL SOIL PROCESSING RECORDS (2-SE	C and 20-SEC)	2,255		
NONPROCESS RECORDS (Test, calibrati	on, etc)	6		
20-SEC PROCESS RECORDS	•	1,382		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		843 AD=0 & MD=0 8		
SOME SORT		539 AD>0&0 <md<mni< td=""><td>xemQNM&gt;QNM&amp;xemC</td><td></td></md<mni<>	xemQNM>QNM&xemC	
UNEXPLAINED RECORDS	5	0		DAUGE
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		UNEXPLAIN	PAUSE
AD=0 & 1	ю O		TIME	TIME 07:04
AD<0 & 1	(D 0		None	11:10
ACT_P <5 kBq	253 29.0%			11.10
• • • • • • • • • • • • • • • • • • •				

13,820

2-	SEC COON!	LCK1002				13,620				
		SEC RECORD			•		(ACT_P >0	kBq)		
	2-	SEC RECORD	S WITH P	OSITIVES	IN >1 DE	ETECTOR				
		2	DETECTO	RS	196	8	31.0%			
		3	DETECTO	RS	40	1	16.5%		,	
		4	DETECTO	RS	5		2.1%			
		5	DETECTO	RS	1		0.4%			
		6	DETECTO	RS	0		0.0%			
		7	DETECTO	RS	0		0.0%			
		8	DETECTO	RS	0		0.0%			
		T	OTAL			242				
	NE	T 2-SEC RE	CORDS WI	TH SORTS		631				
	2-	SEC PERIOD	S WITH N	O SORTS		13,189				
	AV	G TIME BET	WEEN 2-SI	EC SORTS		43.8 s	sec			
1-GATE SO	RTS	446	ACT_ND	NUMBER	SPEC_A		ACT_	P SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)		(Bq/kg)		(Bc	•		(kBq)
JEILOIR	555		1247	,	<del></del>		,			•
1	18	4.0%	-14000	0	-261		400	0 119	13.6%	4
2	49		-12000	0			800			8
3	67		-10000	1	-187		1200	0 162	18.6%	12
4	86	19.3%	-8000	1	-149		1600	0 68	7.8%	16
5	78	17.5%	-6000	3			2000	0 32	3.7%	20
6	66	14.8%	-4000	11	-75		2400		2.4%	24
7	57	12.8%	-2000	44	-37		2800			28
8	25	5.6%	0	142	0		3200			32
TOTAL	446	3.0.0	2000	274	37		3600			36
TOTAL	****		4000	328	75		4000			40
2-GATE SO	RIS	427	6000	267			4400			44
DETECTR	SORTS	FREQ%	8000	166	149		4800			48
8	301(13	1110470	10000	92	187		5200		0.7%	52
9	38	8.9%	12000	37			5600		0.5%	56
10	52	12.2%	14000	18	261		6000		0.5%	60
11	82	19.2%	16000	3	299		6400			64
12	83	19.4%	18000	1	336		6800		0.5%	68
13	76	17.8%	20000	0	373		7200			72
14	76 55	12.9%	22000	0	410		7600		0.0%	76
15	41	9.6%	24000	0	448		8000		0.1%	80
TOTAL	41	7.04	26000	0	485		8400		0.0%	84
TOTAL	421		>28000	0	0		>8400		2.7%	>84
			TOTAL	1388	v		TOTA		C.174	-01
SUMMARY TO	2 1410		IOIAL	1300			1018	. 0.3		
	T PARTICLI	F EVENTS	851		SUBTS BA	ONE GATE	FONIY	446		
	LVVIICE	L LILRIS	1 00							
	LTIPARTICI	I F EVENTS	490		SUBLC BA	TWO GATE	FS	427		

#### REC CODE EXPLANATION

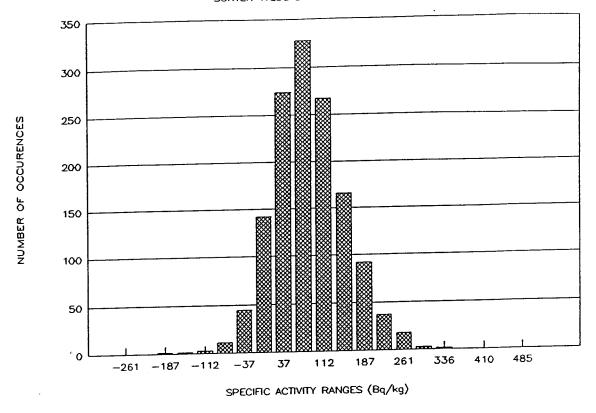
- 1.00 Source check (Soil on belt)
  - 2.00 Empty belt

2-SEC COUNT PERIODS

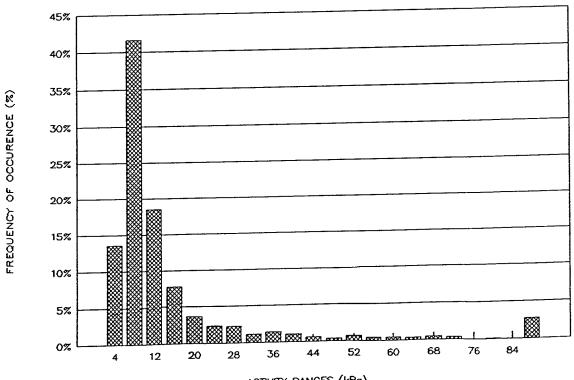
3.00 Test (No process soil)

12:09

SORTER 1\_LOG DATA FOR 04-Jan-93



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 04-Jon-93



ACTIVITY RANGES (kBq)

A-448

SORTER 2 04-Jan-93	-			
AVERAGE BACKGROUND COUNT RATE	0.78 ±	0.04 c/sec		
SORTER SOIL DENSITY	1.15 tons/			
GROUND SOIL DENSITY	1.65 tons/			
GROUND SOLE DENSTITE		CONTAMINATED	CLEAN	
MASS TOTAL		0.83 tons	72.7 tons	
MAXIMUM/SORT		6.7 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	46.9 kg	
FROM DECOMEDY OF MOUTHE PECOMED	<b>v</b>			98.9%
WEIGHT RECOVERY OR VOLUME RECOVER	•	0.66 yd³	57.7 yd³	58.3 yd3/day
EQUIVALENT SOIL-IN-GROUND		3,35 ,=	,	• • •
PARTICLE ACTIVITY (MAXIMUM ESTIMA	TF)			
TOTAL	,	14,692 kBq		
MAXIMUM/SORT		324 kBq	•	
MINIMUM/SORT		2.7 kBq		
HINING SONT				
DISPERSED + PARTICLE (REALISTIC E	STIMATE) ACTIVITY	6,443 kBq	(1,199)kBq	
MAXIMUM/SORT	•••••	277 k8q	13 kBq	
MINIMUM/SORT		0 Bq	-11 kBq	
SPECIFIC ACTIVITY		7,730 Bq/kg	(16)Bq/kg	<b>3</b> .
3. 2011.10 7.0111111				
WORK HISTORY				
WORK DAY START	07:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	07:00 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	08:08 AM	END SOIL PROCESSING	04:57 PM	
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr	
WORK HOURS		10.0 hr		
AVAILABLE HOURS		10.0 hr		
	URS (total 20-sec records			
DOWN-TIME	ono (10101 20 000 1000 ao	2.37 hr		
TOTAL SYSTEM PAUS	F	2.22 hr		
NONAVAILABLE HOUR		0.0 hr		
START-UP	•	1.14 hr		
SHUT-DOWN		0.55 hr		
PLANT PERFORMANCE		76.3%		
PRODUCTIVITY		76.3%		
TOTAL SOIL PROCESSING RECORDS (2-	SEC and 20-SEC)	2,222		
NONPROCESS RECORDS (Test, calibra		12		
20-SEC PROCESS RECORDS		1,373		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		876 AD=0 & MD=0 &	MND>0	
SOME SORT		497 AD>0&0 <md<mne< td=""><td></td><td></td></md<mne<>		
UNEXPLAINED RECOR	os	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	0	-	UNEXPLAIN	PAUSE
AD=0 &			TIME	TIME
AD<0 &			None	07:04
ACT_P <5 kBq	199 23.4%			11:09
101 -2 und				

13,730 2-SEC COUNT PERIODS 849 (ACT\_P >0 kBq) 2-SEC RECORDS WITH SORTS 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR 80.4% 2 DETECTORS 234 17.9% 52 3 DETECTORS 1.4% 4 4 DETECTORS 0.3% 1 5 DETECTORS 0.0% 6 DETECTORS 0.0% 0 7 DETECTORS 0.0% 8 DETECTORS 291 TOTAL 558 NET 2-SEC RECORDS WITH SORTS 13,172 2-SEC PERIODS WITH NO SORTS 49.2 sec AVG TIME BETWEEN 2-SEC SORTS ACT\_P SORT FREQ% ACT\_P NUMBER SPEC\_A ACT ND 424 1-GATE SORTS (kBq) (#) (Bq) (#) (Bq/kg) SORTS FREQ% (Bq) DETECTR 86 10.1% 4 4000 6.4% -14000 -261 27 1 8 333 39.2% 8000 -224 16.5% -12000 70 2 120 14.1% 12 12000 -187 21.5% -10000 5 3 91 16 82 9.7% 16000 -149 16 -8000 21.0% 89 5.7% 20 48 20000 -112 91 -6000 5 81 19.1% 24 35 4.1% 24000 -75 164 11.3% -4000 48 6 28 3.3% 28 28000 -37 268 3.8% -2000 16 7 32 17 2.0% 32000 313 0 0.5% 2 8 36 2.0% 36000 17 37 232 2000 424 TOTAL 1.2% 40 10 40000 75 171 4000 44 1.2% 44000 10 112 66 425 6000 2-GATE SORTS 5 0.6% 48 48000 149 FREQ% 8000 33 SORTS DETECTR 52 0.1% 52000 187 10000 11 8 56 5 0.6% 56000 9 224 12000 11.5% 9 49 0.9% 60 8 60000 3 261 15.3% 14000 10 65 0.8% 64 64000 7 0 299 16000 107 25.2% 11 68 8 0.9% 68000 336 21.2% 18000 0 12 90 0.0% 72 72000 0 0 373 20000 14.8% 63 13 2 0.2% 76 76000 410 22000 0 9.4% 40 14 80 0.0% 0 80000 448 0 24000 2.6% 11 15 0.1% 84 1 84000 485 0 26000 425 TOTAL >84 3.1% >84000 26 0 0 >28000 849 TOTAL TOTAL 1385 SUMMARY TOTALS SORTS BY ONE GATE ONLY 424 809 HOT PARTICLE EVENTS 425 SORTS BY TWO GATES MULTIPARTICLE EVENTS 437 0 DISTRIBUTED EVENTS

#### REC CODE EXPLANATION

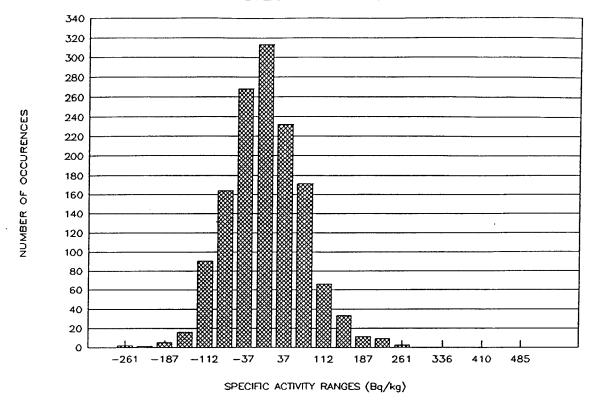
1.00 Source check (Soil on belt)

2.00 Empty belt

3.00 Test (No process soil)

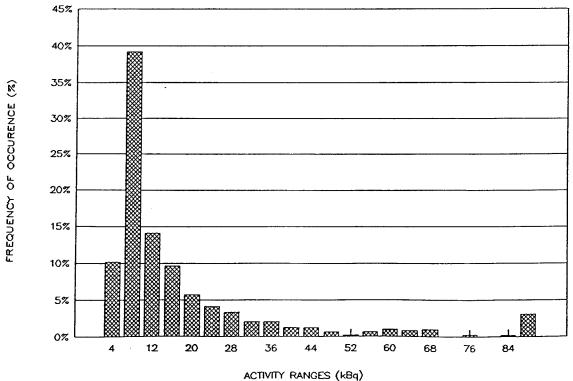
12:09

SORTER 2\_LOG DATA FOR 04-Jan-93



### JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 04-Jan-93



A-451

07				•
SORTER 1 02-Jan-93	•			
AVERAGE BACKGROUND COUNT RATE	0.69 ± 0.0	04 c/sec		
SORTER SOIL DENSITY	1.15 tons/m³			
GROUND SOIL DENSITY	1.65 tons/m³		CLEAN	
		CONTAMINATED	CLEAN 19.5 tons	
MASS TOTAL		0.62 tons	53.6 kg	
MAXIMUM/SORT		11.4 kg	33.8 kg 42.2 kg	
MINIMUM/SORT		0.7 kg	42.2 Kg	
				96.9%
WEIGHT RECOVERY OR VOLUME RECOVERY		0.70 vd3	15.4 yd³	15.9 yd3/day
EQUIVALENT SOIL-IN-GROUND		0.49 yd³		•
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	)	9,310 kBq		
TOTAL .		180 kBq		
MAXIMUM/SORT		2.4 kBq		
MINIMUM/SORT		2.4 KUY		
		4,048 kBq	2,005 kBq	
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTIVITY	193 kBq	16 kBq	
MAXIMUM/SORT		0 Bq	-5 kBq	
MINIMUM/SORT		6,497 Bq/kg	103 Bq/k	g
SPECIFIC ACTIVITY		• • • • • • • • • • • • • • • • • • • •		
WORK HISTORY				
WORK DAY START	07:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	07:00 AM	PLANT SHUT-DOWN	05:30 PH	
START SOIL PROCESSING	07:24 AM	END SOIL PROCESSING		
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr	
		10.0 hr		
WORK HOURS		10.0 hr		
AVAILABLE HOURS		2.08 hr		
ACTUAL PROCESS HOUR	S (total 20-sec records)	7.92 hr		
DOWN-TIME		0.50 hr		
TOTAL SYSTEM PAUSE		0.0 hr		
NONAVAILABLE HOURS		0.40 hr		
START-UP		8.01 hr		
SHUT-DOWN		20.8%		
PLANT PERFORMANCE		20.8%		
PRODUCTIVITY				
TOTAL SOIL PROCESSING RECORDS (2-SE	C and 20-SEC)	1,050		
NONPROCESS RECORDS (Test, calibrati	on, etc)	7		
20-SEC PROCESS RECORDS	•	375		
TOTAL SORT		0=DMM & 0 <dm 0<="" td=""><td></td><td></td></dm>		
NO SORT		114 AD=0 & MD=0	& MND>0	_
SOME SORT		261 AD>0&0 <md<mn< td=""><td>CEMCONN&gt;CONN&amp;XEMO</td><td>C</td></md<mn<>	CEMCONN>CONN&XEMO	C
UNEXPLAINED RECORDS	5	0		DALICE
0 <ad<1kbq &="" md="">0</ad<1kbq>	1		UNEXPLAIN	PAUSE
AD=0 & 1	10 0		TIME	TIME
AD<0 & I	_		09:23:37	06:54 09:29
ACT_P <5 kBq	200 29.6%			07.27
<del>-</del>				

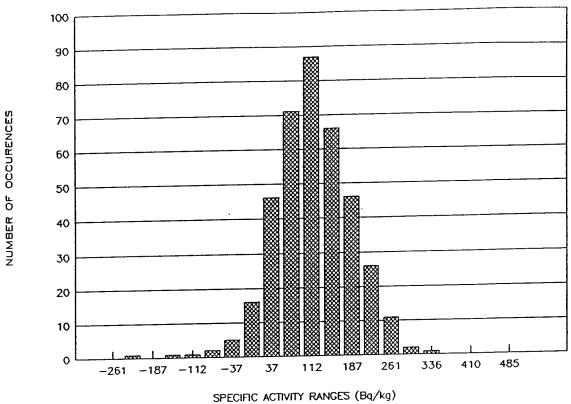
2-SEC COUNT PERIODS	3,7	50
2-SEC RECORDS WITH SORTS	- 6	75 (ACT_P >0 kBq)
2-SEC RECORDS WITH POSITIVES	IN >1 DETECT	OR
2 DETECTORS	169	80.9%
3 DETECTORS	30	14.4%
4 DETECTORS	9	4.3%
5 DETECTORS	1	0.5%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL	20	09
NET 2-SEC RECORDS WITH SORTS	4	<b>56</b>
2-SEC PERIODS WITH NO SORTS	3,2	34
AVG TIME BETWEEN 2-SEC SORTS	16.	.1 sec

1-GATE	SORTS	356	ACT_ND	NUMBER	SPEC A	· ACT_P	SORT	FREQ%	ACT_P
DETECT		FREQ%	(Bq)	(#)	(Bq/kg)	(8q)	(#)		(kBq)
			•						
1	12	3.4%	-14000	0	-261	4000	105	15.6%	4
2	54	15.2%	-12000	1	-224	8000	246	36.4%	. 8
3		17.1%	-10000	0	-187	12000	114	16.9%	12
4	44	12.4%	-8000	1	-149	16000	50	7.4%	16
5	68	19.1%	-6000	1	-112	20000	45	6.7%	20
6	43	12.1%	-4000	2	-75	24000	20	3.0%	24
7	53	14.9%	-2000	5	-37	28000	20	3.0%	28
8	21	5.9%	0	16	0	32000	11	1.6%	32
TOTAL	356		2000	46	37	36000	10	1.5%	36
			4000	71	75	40000	10	1.5%	40
2-GATE	SORTS	319	6000	87	112	44000	8	1.2%	44
DETECT	R SORTS	FREQ%	8000	66	149	48000	4	0.6%	48
8			10000	46	187	52000	2	0.3%	52
9	31	9.7%	12000	26	224	56000	4	0.6%	56
10	59	18.5%	14000	11	261	60000	4	0.6%	60
11	42	13.2%	16000	2	299	64000	4	0.6%	64
12	55	17.2%	18000	1	336	68000	3	0.4%	68
13	43	13.5%	20000	0	373	72000	2	0.3%	72
14	50	15.7%	22000	0	410	76000	4	0.6%	76
15	39	12.2%	24000	0	448	80000	1	0.1%	80
TOTAL	319		26000	0	485	84000	1	0.1%	84
			>28000	0	0	>84000	7	1.0%	>84
			TOTAL	<b>3</b> 82		TOTAL	675		
SUMMAR	Y TOTALS								
	HOT PARTI	CLE EVENTS	623		SORTS BY	ONE GATE ONLY	356		
	MULTIPART	ICLE EVENTS	308		SORTS BY	TWO GATES	319		
	DISTRIBUT	ED EVENTS	0						

#### REC CODE EXPLANATION

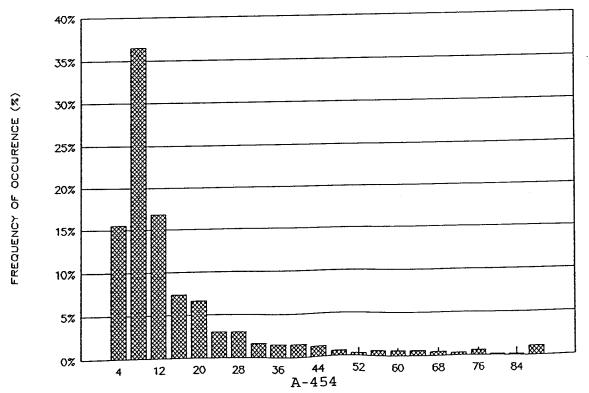
- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 1 LOG DATA FOR 02-Jan-93



# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 02-Jan-93



SORTER 1 31-Dec-92					
AVERAGE BACKGROUND COUNT RATE		0.69 ± 0.	02 c/sec		
SORTER SOIL DENSITY		1.15 tons/m³			
GROUND SOIL DENSITY		1.65 tons/m³			
			CONTAMINATED	CLEAN	
MASS TOTAL			0.86 tons	74.9 to	ons
MAXIMUM/SORT			9.4 kg	53.6 kg	į.
MINIMUM/SORT			0.7 kg	44.2 kg	l
WEIGHT RECOVERY OR VOLUME RECOVERY					98.9%
EQUIVALENT SOIL-IN-GROUND			0.68 yd³	59.4 yd	60.1 yd3/day
PARTICLE ACTIVITY (MAXIMUM ESTIMATO	E)				
TOTAL			11,804 kBq		
MAXIMUM/SORT	-		361 kBq		·
MINIMUM/SORT			2.0 kBq		
DISPERSED + PARTICLE (REALISTIC ES	TIMATE) ACTIVI	TY	5,296 kBq	6,327 kB	q
MAXIMUM/SORT			246 kBq	16 kB	q
MINIMUM/SORT			0 Bq	-6 kB	q
SPECIFIC ACTIVITY			6,164 Bq/kg	84 Bq	/kg
WORK HISTORY					
WORK DAY START	07:00 AM		WORK DAY END	05:30 PM	
PLANT START-UP	07:00 AM		PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	08:07 AM		END SOIL PROCESSING	04:53 PM	
LUNCH START	11:30 AM		LUNCH PERIOD	0.5 hr	
WORK HOURS			10.0 hr		
AVAILABLE HOURS			10.0 hr		
ACTUAL PROCESS HOUR	RS (total 20-se	ec records)	7.86 hr		
DOWN-TIME			2.14 hr		
TOTAL SYSTEM PAUSE			1.38 hr		
NONAVAILABLE HOURS.			0.0 hr		
START-UP			1.13 hr		
SHUT-DOWN			0.61 hr		
PLANT PERFORMANCE			78.6%		
PRODUCTIVITY			78.6%		
TOTAL SOIL PROCESSING RECORDS (2-SE	C and 20-SEC)		2,212		
NONPROCESS RECORDS (Test, calibrati	on, etc)		53		
20-SEC PROCESS RECORDS			1,414		
TOTAL SORT			0 MD>0 & MND=0		
NO SORT			874 AD=0 & MD=0 &	MND>0	
SOME SORT			540 AD>0&0 <md<mnd< td=""><td>max&amp;MND<mndm< td=""><td>ax</td></mndm<></td></md<mnd<>	max&MND <mndm< td=""><td>ax</td></mndm<>	ax
UNEXPLAINED RECORDS	;		0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	3			UNEXPLAIN	PAUSE
AD=0 & M	ID O			TIME	TIME
AD<0 & M				12:35:23	07:34
ACT_P <5 kBq	237 2	29.7%		16:25:23	08:04

		nc01000			1	4,140				16	:26:43	11:09
2	-SEC COUNT	SEC RECORDS	חזדוו כח	219			(ACT_P	>0 kBq)				11:57
	2-	SEC RECORDS	. WITH DO	CITIVES	IN >1 DFT		_					
	2-		DETECTOR		182		83.9%					
			DETECTOR		31		14.3%					
		_	DETECTOR		3		1.4%					
			DETECTOR		1		0.5%					
					0		0.0%					
			DETECTOR		0		0.0%					
			DETECTOR		0		0.0%					
				.3	•	217						
			DAL	PTQN2 U		581						
		T 2-SEC REC			1	13,559						
		-SEC PERIODS			`	48.7	sec					
	A'	VG TIME BET	WEEN 2-30	C SUKIS		,,,,						
			ACT UD	ATT IMPED	SPEC_A			ACT P	SORT	FREQ%	ACT_P	
1-GATE		. 409	ACT_ND		(Bq/kg)			(Bq)	(#)		(kBq)	
DETECTR	SORTS	FREQ%	(Bq)	(#)	(64,450)			•				
		. 24	4/000	0	-261			4000	116	14.0%	4	
1	26	6.2%	-14000	0	-224			8000	330	40.0%	8	
2	59	14.0%	-12000					12000	147	17.8%	12	
3	71	16.9%	-10000	1	-149			16000	63	7.6%	16	
4	59	14.0%	-8000	0	-112			20000	28	3.4%	20	
5	68	16.2%	-6000	11	-75			24000	27	3.3%	24	
6	64	15.2%	-4000	36	-37			28000	18	2.2%	28	
7	55	13.1%	-2000	93	0			32000	16	1.9%	32	
8	19	4.5%	2000	208	37			36000	10	1.2%	36	
TOTAL	421		2000	321	75			40000	10	1.2%	40	
		700	4000	310				44000	6	0.7%	44	
2-GATE		389	6000	233	149			48000	4	0.5%	48	
DETECTR	SORTS	FREQ%	8000	124	187			52000	8	1.0%	52	
8		~	10000	72				56000	6	0.7%	56	
9	39	9.6%	12000	23				60000	9	1.1%	60	
10	58	14.3%	14000	3				64000	1	0.1%	64	
11	80	19.8%	16000	1				68000	1	0.1%	68	
12	61	15.1%	18000	0				72000	2	0.2%	72	
13	63	15.6%	20000	0				76000	1	0.1%	76	
14	61	15.1%	22000	0				80000	2	0.2%	80	
15	43	10.6%	24000	0	_			84000	0	0.0%	84	
TOTAL	405		26000	0	_			>84000	21	2.5%	>84	
			>28000	1439	-			TOTAL	826			
			TOTAL	1439								
SUMMAR	V-TOTALS	CLE EVENTS	780		SORTS BY	ONE G	ATE ON	ILY	409			
		ICLE EVENTS	502		SORTS BY				389			
	DISTRIBUT		0									
	PISIKIBUN	LU CTERIS	•									

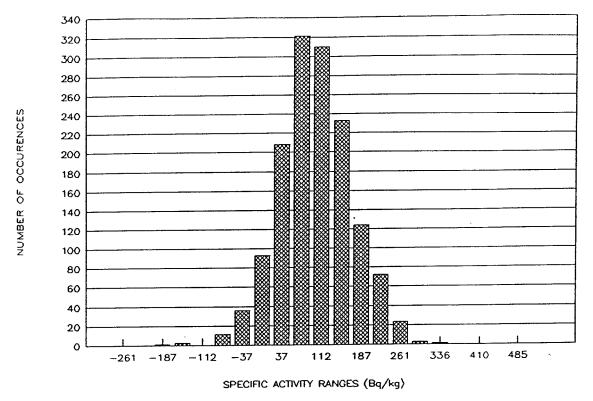
#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

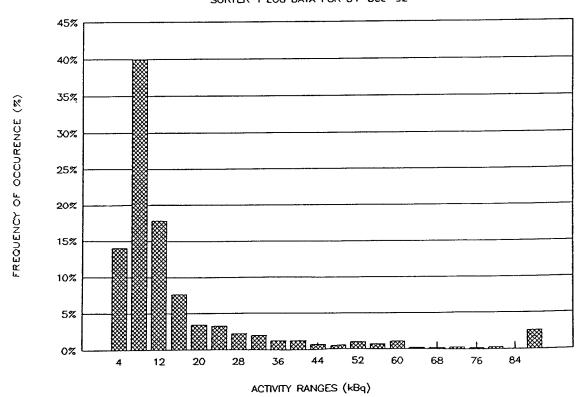
2.00 Empty belt

3.00 Test (No process soil)

SORTER 1,LOG DATA FOR 31-Dec-92



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 31-Dec-92



A-457

SORTER 1 30-Dec-92				
AVERAGE BACKGROUND COUNT RATE	0.70 ± 0	.02 c/sec		
	1.15 tons/m³			
SORTER SOIL DENSITY GROUND SOIL DENSITY	1.65 tons/m <sup>3</sup>			
GROOMD SOLE DEMS!!!		CONTAMINATED	CLEAN	
MASS TOTAL		0.69 tons	75.5 ton	s
MAXIMUM/SORT		6 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	47.5 kg	
HINTHON SOUL				
WEIGHT RECOVERY OR VOLUME RECOVERY				99.1%
EQUIVALENT SOIL-IN-GROUND		0.55 yd³	59.9 yd³	60.4 yd3/day
Eag. Wilder				
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	<b>E)</b>			
TOTAL		13,518 kBq		
MAXIMUM/SORT	·	418 kBq		·
MINIMUM/SORT		2.4 kBq		
			<b>.</b> ·	
DISPERSED + PARTICLE (REALISTIC ES	FIMATE) ACTIVITY	5,609 kBq	2,017 kBq	
MAXIMUM/SORT		275 kBq	14 kBq	
MINIMUM/SORT		0 Bq	-9 kBq	
SPECIFIC ACTIVITY		8,087 Bq/kg	27 Bq/	kg
HODE HICTORY				•
WORK HISTORY WORK DAY START	07:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	07:00 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	07:55 AM	END SOIL PROCESSING	04:59 PM	
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr	
CORCII START				
WORK HOURS		10.0 hr		
AVAILABLE HOURS		10.0 hr		
ACTUAL PROCESS HOUR	RS (total 20-sec records)	7.90 hr		
DOWN-TIME		2.10 hr		
TOTAL SYSTEM PAUSE		1.58 hr		•
NONAVAILABLE HOURS		0.0 hr		
START-UP		0.93 hr		
SHUT-DOWN		0.51 hr		
PLANT PERFORMANCE	•	79.0%		
PRODUCTIVITY		79.0%		
TOTAL COLL DESCRIPTION DECORDS (2-SE	ond 20-SEC)	2,112		
TOTAL SOIL PROCESSING RECORDS (2-SE NONPROCESS RECORDS (Test, calibration)		11		
20-SEC PROCESS RECORDS	ion, etc)	1,422		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		927 AD=0 & MD=0 8	MND>0	
SOME SORT		495 AD>0&0 <md<mnd< td=""><td></td><td><b>K</b></td></md<mnd<>		<b>K</b>
UNEXPLAINED RECORDS	•	0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	1		UNEXPLAIN	PAUSE
AD=0 & M			TIME	TIME
AD<0 & N	·-		12:26:11	07:30
ACT_P <5 kBq	173 25.1%			07:58

14,220

2	-SEC COUNT	PERIODS				14,220					11:12
		SEC RECORD			-		CT_P >0 kBd	<b>4</b> )			12:10
	2-	SEC RECORD	S WITH PO	OSITIVES	IN >1 DE	TECTOR					
		2	DETECTO	RS	166	78	3.3%				
		3	DETECTO	RS	42	19	2.8%				
		4	DETECTO	RS	4	1	.9%				
		5	DETECTO	RS	0	0	.0%				
		6	DETECTO	RS	0	0	.0%				
		7	DETECTOR	RS	0	0	.0%				
		8	DETECTOR	RS	0	0	.0%				
		T	OTAL			212					
	NE	T 2-SEC RE		TH SORTS		478					
		SEC PERIOD				13,742					
	_	G TIME BET				59.5 se	ec				
I-GATE SO	ORTS .	362	ACT_ND	NUMBER	SPEC_A		ACT_P	SORT	FREQ%	ACT_P	
ETECTR	SORTS	FREQ%	(Bq)		(Bq/kg)		(Bq)	(#)		(kBq)	
1	17	4.7%	-14000	0	-261		4000	88	12.8%	4	
2	47	13.0%	-12000	0	-224		8000	265	38.4%	8	
3	54	14.9%	-10000	2	-187		12000	102	14.8%	12	
4	70	19.3%	-8000	4	- 149		16000	64	9.3%	16	
5	54	14.9%	-6000	12	-112		20000	32	4.6%	20	
6	56	15.5%	-4000	48	-75		24000	25	3.6%	24	
7	50	13.8%	-2000	131	-37		28000	14	2.0%	28	
8	14	3.9%	0	295	0		32000	11	1.6%	32	
TOTAL	362		2000	348	37		36000	13	1.9%	36	
			4000	309	75		40000	7	1.0%	40	
-GATE SO	ORTS	328	6000	169	112		44000	5	0.7%	44	
ETECTR	SORTS	FREQ%	8000	71	149		48000	9	1.3%	48	
8			10000	29	187		52000	5	0.7%	52	
9	30	9.1%	12000	12	224		56000	4	0.6%	56	
10	45	13.7%	14000	3	261		60000	8	1.2%	60	
11	63	19.2%	16000	0	299		64000	5	0.7%	64	
12	59	18.0%	18000	0	336		68000	0	0.0%	68	
13	57	17.4%	20000	0	373		72000	2	0.3%	72	
14	42	12.8%	22000	0	410		76000	1	0.1%	76	
15	32	9.8%	24000	0	448	•	80000	4	0.6%	80	
TOTAL	328		26000	0	485		84000	0	0.0%	84	
			>28000	0	0		>84000	26	3.8%	>84	
			TOTAL	1433			TOTAL	690			
UMMARY 1	TOTALS										
	OT PARTICL	E EVENTS	662		SORTS BY	ONE GATE	ONLY	362			
	JLTIPARTIC		374			TWO GATE		328			

#### REC CODE EXPLANATION

1.00 Source check (Soil on belt)

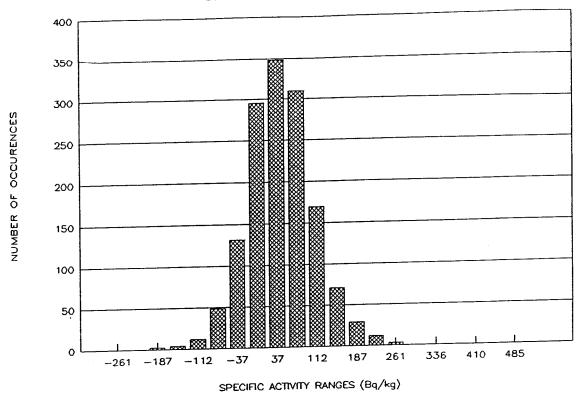
2.00 Empty belt

2-SEC COUNT PERIODS

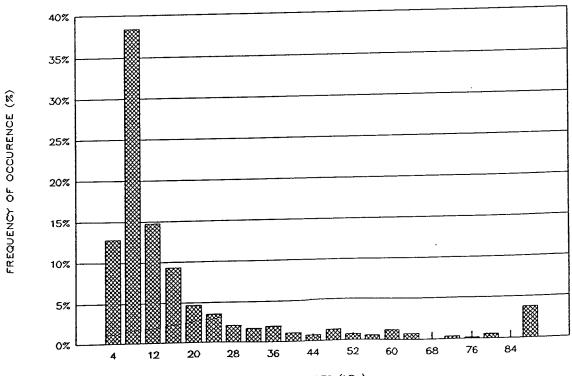
3.00 Test (No process soil)

11:12

SORTER 1 LOG DATA FOR 30-Dec-92



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 30-Dec-92



ACTIVITY RANGES (kBq)

A-460

SORTER 1 29-Dec-92							
AVERAGE BACKGROUND COUNT RATE	0.70	0.04	c/sec				
SORTER SOIL DENSITY	1.15	5 tons/m³					
GROUND SOIL DENSITY	1.65	5 tons/m³					
			CONTAM	INATED	CLEAN		
MASS TOTAL			1.11	tons	74.8	tons	
MAXIMUM/SORT			56.2	kg	53.6	kg	
MINIMUM/SORT			0.7	kg	42.8	kg	
TO THE DESCRIPTION OF MOLIMIC DECOMEDY							98.5%
WEIGHT RECOVERY OR VOLUME RECOVERY			0.88	vd3	59.3	vel3	60.2 yd3/day
EQUIVALENT SOIL-IN-GROUND			0.00	yu	27.2	,u	00.2 ya /aay
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)	•						
TOTAL			19,110	kBq			
MAXIMUM/SORT			1,018	-			
MINIMUM/SORT			, -	kBq			
MINIMON JONE				•			
DISPERSED + PARTICLE (REALISTIC EST	MATE) ACTIVITY		7,794	kBq	<i>7</i> 59	kBq	
MAXIMUM/SORT			669	kBq	14	kBq	
MINIMUM/SORT			0	Bq	-11	kBq	
SPECIFIC ACTIVITY			7,042	Bq/kg	10	Bq/kg	
HODE MACTORY							
WORK HISTORY	07:00 AM		WORK D	AV END	05:30 PM		
WORK DAY START	07:00 AM			SHUT-DOWN	05:30 PM		
PLANT START-UP START SOIL PROCESSING	07:34 AM			IL PROCESSING			
LUNCH START	11:30 AM		LUNCH 1		0.5	hr	
WORK HOURS				10.0 hr			
AVAILABLE HOURS				10.0 hr			
ACTUAL PROCESS HOURS	(total 20-sec r	records)		7.87 hr			
DOWN-TIME				2.13 hr			
TOTAL SYSTEM PAUSE				1.79 hr			
NONAVAILABLE HOURS				0.0 hr			
START-UP				0.58 hr			
SHUT-DOWN				0.61 hr			
PLANT PERFORMANCE				78.7%			
PRODUCTIVITY				78.7%			
TOTAL SOIL PROCESSING RECORDS (2-SEC	and 20-SEC)			2,300			
NONPROCESS RECORDS (Test, calibration				13			
20-SEC PROCESS RECORDS	-		1,417				
TOTAL SORT				MD>0 & MND=0			
NO SORT			889	AD=0 & MD=0 &	MND>0		
SOME SORT			525	AD>0&0 <md<mnd< td=""><td>max&amp;MND<mn< td=""><td>Dmax</td><td></td></mn<></td></md<mnd<>	max&MND <mn< td=""><td>Dmax</td><td></td></mn<>	Dmax	
UNEXPLAINED RECORDS			0				
0 <ad<1kbq &="" md="">0</ad<1kbq>	3				UNEXPLAIN	P	AUSE
AD=0 & MD	0				TIME		TIME
AD<0 & MD	0				09:30:27		07:13
ACT_P <5 kBq	249 28.2	2%			13:11:52		07:42

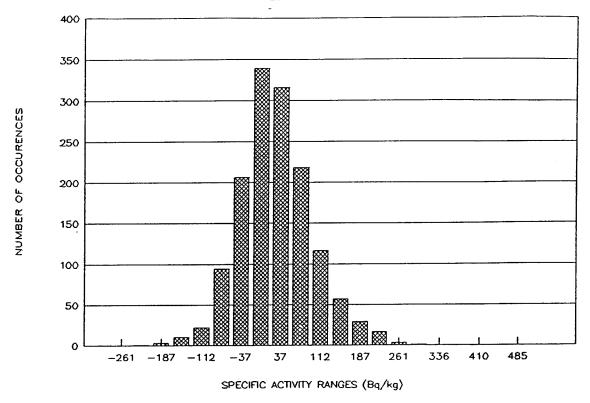
Printed on 02/03/93 at 09:09:31 AM

		3 4 5 6 7 8	S WITH PO DETECTOR DETECTOR DETECTOR DETECTOR DETECTOR DETECTOR OTAL CORDS WITH NO	OSITIVES RS	IN >1 DE 227 41 9 1 0 0		(ACT_P > 0 kBq)  81.7%  14.7%  3.2%  0.4%  0.0%  0.0%  0.0%		15	5:47:37	07:54 11:05 11:59 14:24 14:26 14:28
1-GATE	CODIC	444	ACT_ND	NUMBER	SPEC_A		ACT_P	SORT	FREQ%	ACT_P	
DETECT		FREQ%	(Bq)	•	(Bq/kg)		(Bq)	(#)		(kBq)	
DETECT	K CONTO		·					427	47.0%	,	
1	7	1.6%	-14000	0	-261		4000	124	14.0%	4 8	
2	44	9.9%	-12000	1	-224		8000	333	37.7%		
3	74	16.7%	-10000	3	-187		12000	130	14.7%	12	
4	78	17.6%	-8000	10	-149		16000	64	7.2%	16	
5	91	20.5%	-6000	22	-112		20000	46	5.2%	20	
6	82	18.5%	-4000	94	-75		24000	35	4.0%	24	
7	56	12.6%	-2000	206	-37		28000	21	2.4%	28 72	
8	12	2.7%	0	339	0		32000	12	1.4%	32 36	
TOTAL	444		2000	315	37		36000	15	1.7%	<b>40</b>	
			4000	218	75		40000	9	1.0% 1.5%	44	
2-GATE	SORTS	439	6000	116	112		44000	13 9	1.0%	48	
DETECT	R SORTS	FREQ%	8000	57	149		48000 52000	5	0.6%	52	
8			10000	29	187		56000	5	0.6%	56	
9		6.6%	12000	16	224		60000	4	0.5%	60	
10	57	13.0%	14000	3	261		64000	4	0.5%	64	
11	81	18.5%	16000	1	299		68000	3	0.3%	68	
12		19.8%	18000	0	336		72000	5	0.6%	72	
13	89	20.3%	20000	0	373		76000	2	0.2%	76	
14	61	13.9%	22000	0	410		80000	4	0.5%	80	
15	35	8.0%	24000	0	448		•	3	0.3%	84	
TOTAL	439		26000	0	485		84000			>84	
			>28000	0	0		>84000	37	4.64	-04	
			TOTAL	1430			TOTAL	883			
SUMMAR	Y TOTALS							,,,			
		ICLE EVENTS	845				ATE ONLY	444			
		TICLE EVENTS	570		SORTS B	TWO G	ATES	439			
	DISTRIBU	TED EVENTS	236								

#### REC CODE EXPLANATION

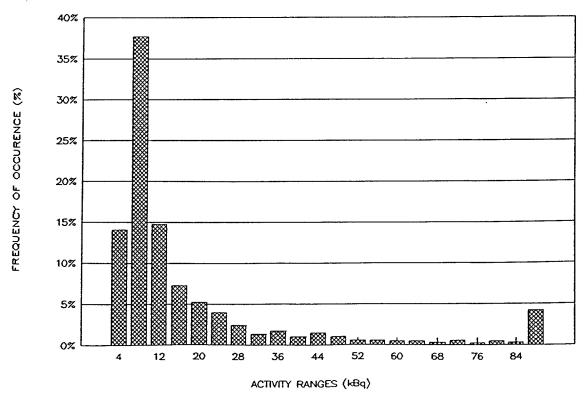
- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 1 LOG DATA FOR 29-Dec-92



# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 29-Dec-92



SORTER 1 28-Dec-92				
TARKED COUNT PATE	0.68 ± 0.0	4 c/sec		
AVERAGE BACKGROUND COUNT RATE	1.15 tons/m«			
SORTER SOIL DENSITY	1.65 tons/m«			
GROUND SOIL DENSITY		CONTAMINATED	CLEAN	
		0.10 tons	16.8 tons	
MASS TOTAL		4.7 kg	53.6 kg	
MAXIMUM/SORT		0.7 kg	48.9 kg	
MINIMUM/SORT				
WEIGHT RECOVERY OR VOLUME RECOVE	24			99.4%
EQUIVALENT SOIL-IN-GROUND	•	0.08 yd«	13.3 yd«	13.4 yd«/day
EQUIVALENT SOIL-IN-GROOMS				
PARTICLE ACTIVITY (MAXIMUM ESTIM	ATE)			
		1,124 kBq		
TOTAL MAXIMUM/SORT		67 kBq		
		2.8 kBq		
MINIMUM/SORT				
DISPERSED + PARTICLE (REALISTIC	FSTIMATE) ACTIVITY	492 kBq	329 kBq	
		84 kBq	12 kBq	
MAXIMUM/SORT		0 Bq	-8 kBq	
MINIMUM/SORT SPECIFIC ACTIVITY		5,165 Bq/kg	20 Bq/kg	
SPECIFIC ACTIVITY				
WORK HISTORY		HODE DAY END	05:30 PM	
WORK DAY START	07:00 AM	WORK DAY END PLANT SHUT-DOWN	05:30 PM	
PLANT START-UP	07:00 AM	END SOIL PROCESSING	04:56 PM	
START SOIL PROCESSING	08:18 AM	LUNCH PERIOD	0.5 hr	
LUNCH START	11:30 AM	LONCH PERIOD		
		10.0 hr		
WORK HOURS		10.0 hr		
AVAILABLE HOURS	OURS (total 20-sec records)	1.75 hr		
	OOKS (total 20 see 1000.00)	8.25 hr		
DOWN-TIME	ice.	8.19 hr		
TOTAL SYSTEM PAGE		0.0 hr		
NONAVAILABLE HOU	ik S	1.30 hr		
START-UP		0.56 hr		
SHUT-DOWN	ne.	17.5%		
PLANT PERFORMAN	,c	17.5%		
PRODUCTIVITY				
TOTAL SOIL PROCESSING RECORDS (	2-SEC and 20-SEC)	406		
NONPROCESS RECORDS (Test, calib	ration, etc)	9		
20-SEC PROCESS RECORDS	·	315		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		241 AD=0 & MD=0		
SOME SORT		74 AD>0&0 <md<mn< td=""><td>Dmax&amp;MND<mndmax< td=""><td></td></mndmax<></td></md<mn<>	Dmax&MND <mndmax< td=""><td></td></mndmax<>	
UNEXPLAINED REC	DRDS	0		DAUCE
0 <ad<1kbq &="" md=""></ad<1kbq>	_		UNEXPLAIN	PAUSE
- · · · ·	& MD 0		TIME	TIME
	& MD 0		None	07:02
ACT_P <5 kBq	24 26.4%			09:12

Printed on 07/12/93 at 01:53:06 PM

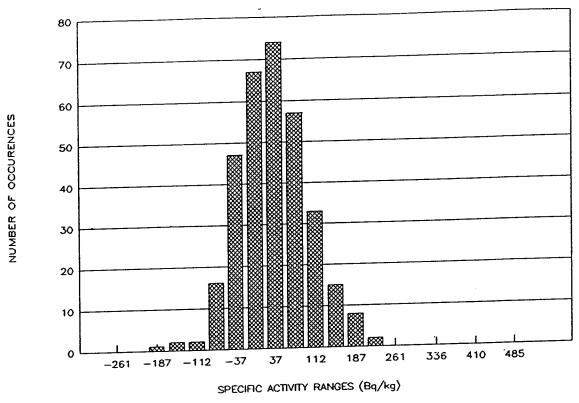
	2-SEC CO	UNT PERIODS				ERR						15:26
		2-SEC RECORD	S WITH S	ORTS		91	(ACT_P	>0 kBq	)			16:57
		2-SEC RECORD			IN >1 DE	TECTOR						
		2	DETECTO	RS	23		85.2%					
		3	DETECTO	RS	4		14.8%					
		4	DETECTO	RS	0		0.0%					
		5	DETECTO	RS	0		0.0%					
		6	DETECTO	RS	0		0.0%					
		7	DETECTO	RS	0		0.0%					
		8	DETECTO	RS	0		0.0%					
		T	OTAL			27						
		NET 2-SEC RE	CORDS WI	TH SORTS		64						
		2-SEC PERIOD	S WITH N	O SORTS		ERR						
		AVG TIME BET	WEEN 2-S	EC SORTS		ERR	sec					
1-0475	SORTS	43	ACT ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P	
DETECT		FREQ%	(Bq)		(Bq/kg)			(Bq)	(#)		(kBq)	
DETECT	K JOKIS	, KEGA	(54)	,	(=4, ::3,							
1	0	0.0%	-14000	0	-261			4000	11	12.1%	4	
2			-12000	0	-224			8000	39	42.9%	8	
3		9.3%	-10000	1	-187			12000	15	16.5%	12	
4		14.0%	-8000	2	-149			16000	8	8.8%	16	
5			-6000	2	-112			20000	5	5.5%	20	
6		23.3%	-4000	16	-75			24000	1	1.1%	24	
7		20.9%	-2000	47	-37		:	28000	3	3.3%	28	
8		2.3%	0	67	0			32000	1	1.1%	32	
TOTAL	43		2000	. 74	37		:	36000	0	0.0%	36	
			4000	57	75			40000	3	3.3%	40	
2-GATE	SORTS	48	6000	33	112			44000	0	0.0%	44	
DETECT		FREQ%	8000	15	149			48000	1	1.1%	48	
8			10000	8	187		!	52000	1	1.1%	52	
9		2.1%	12000	2	224		!	56000	1	1.1%	56	
10		10.4%	14000	0	261			60000	0	0.0%	60	
11		12.5%	16000	0	299			64000	1	1.1%	64	
12		22.9%	18000	0	336			68000	1	1.1%	68	
13		25.0%	20000	0	373			72000	0	0.0%	72	
14		18.8%	22000	0	410			76000	0	0.0%	76	
15		8.3%	24000	0	448		;	B0000	0	0.0%	80	
TOTAL	48		26000	0	485		;	84000	0	0.0%	84	
. 3			>28000	0	0		>	84000	0	0.0%	>84	
	*		TOTAL	324				TOTAL	91			
SUMMAR	Y TOTALS											
		ICLE EVENTS	93		SORTS BY	ONE GA	TE ONL	Y	43			
		TICLE EVENTS	49		SORTS BY				48			
		TED EVENTS	0									
			,									

#### REC CODE EXPLANATION

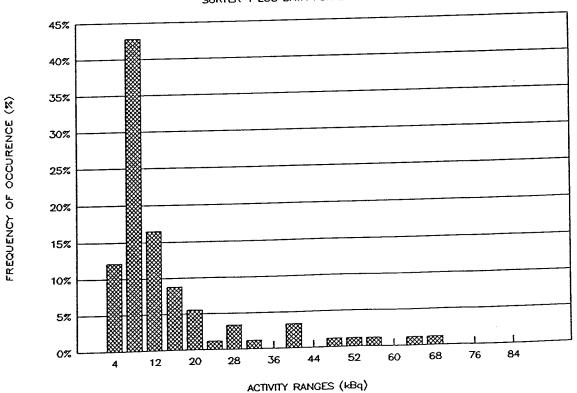
- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

15:26

SORTER 1 LOG DATA FOR 28-Dec-92



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 28-Dec-92



A-466

SORTER 1 26-Dec-92				
AVERAGE BACKGROUND COUNT RATE	0.69 p	0.03 c/sec		
SORTER SOIL DENSITY	1.15 tons/mL	J		
GROUND SOIL DENSITY	1.65 tons/mi	J		
		CONTAMINATED	CLEAN	
MASS TOTAL		0.09 tons	32.0 tor	าร
MAXIMUM/SORT		4 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	49.5 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY	1			99.7%
EQUIVALENT SOIL-IN-GROUND		0.07 ydU	25.4 ydt	J 25.4 ydU/day
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	TE)			
TOTAL		1,863 kBq		
MAXIMUM/SORT		188 kBq		
MINIMUM/SORT		2.6 kBq		
DISPERSED + PARTICLE (REALISTIC ES	STIMATE) ACTIVITY	736 kBq	(289)kBq	ı
MAXIMUM/SORT		107 kBq	13 kBq	
MINIMUM/SORT		0 Bq	-10 kBq	
SPECIFIC ACTIVITY		7,937 Bq/kg	(9)Bq/	kg
WORK HISTORY				
WORK DAY START	07:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	07:00 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	01:34 PM	END SOIL PROCESSING	04:53 PM	
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr	
WORK HOURS		10.0 hr		
AVAILABLE HOURS		10.0 hr		
ACTUAL PROCESS HOU	RS (total 20-sec records)	3.33 hr		
DOWN-TIME		6.67 hr		
TOTAL SYSTEM PAUSE		0.86 hr		
NONAVAILABLE HOURS		0.0 hr		
START-UP		6.57 hr		
SHUT-DOWN		0.61 hr		
PLANT PERFORMANCE		33.3%		
PRODUCTIVITY		33.3%		
TOTAL SOIL PROCESSING RECORDS (2-S	- · - · •	686		
NONPROCESS RECORDS (Test, calibrat	ion, etc)	10		
20-SEC PROCESS RECORDS		599		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		526 AD=0 & MD=0 &	MND>0	
SOME SORT		73 AD>0&0 <md<mnd< td=""><td>max&amp;MND<mndma)< td=""><td>•</td></mndma)<></td></md<mnd<>	max&MND <mndma)< td=""><td>•</td></mndma)<>	•
UNEXPLAINED RECORDS		0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		UNEXPLAIN	PAUSE
AD=0 & 1			TIME	TIME
AD<0 8 1			None	12:54
ACT_P <5 kBq	23 26.4%			16:55

File S1JA1226.WR1n

Printed on 01/07/93 at 12:27:22 PM

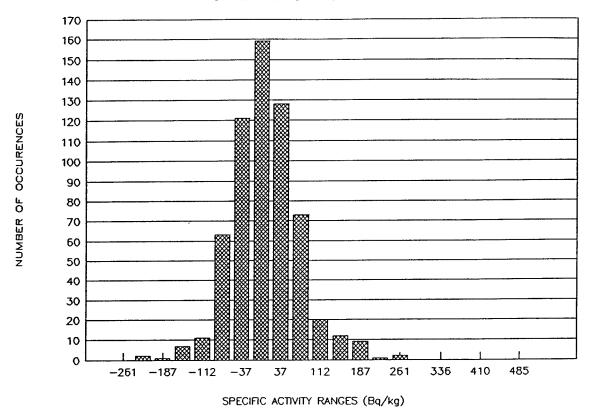
2-SEC COUNT PERIODS	ERR	
2-SEC RECORDS WITH SORTS	87	(ACT_P >0 kBq)
2-SEC RECORDS WITH POSITIVES	IN >1 DETECTOR	
2 DETECTORS	23	74.2%
3 DETECTORS	7	22.6%
4 DETECTORS	1	3.2%
5 DETECTORS	0	0.0%
6 DETECTORS	0	0.0%
7 DETECTORS	0	0.0%
8 DETECTORS	0	0.0%
TOTAL	31	
NET 2-SEC RECORDS WITH SORTS	56	
2-SEC PERIODS WITH NO SORTS	ERR	
<del>-</del>		sec
AVG TIME BETWEEN 2-SEC SORTS	LKK	500

1-GATE S	no t e	45	ACT ND	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
	SORTS	FREQ%	(Bq)		(Bq/kg)	(Bq)	(#)		(kBq)
DETECTR	20K12	LUCAN	(54)	<b></b> ,					
1	3	6.7%	-14000	0	-261	4000	13	14.9%	4
2	10	22.2%	-12000	2	-224	8000	30	34.5%	8
3	4	8.9%	-10000	1	-187	12000	17	19.5%	12
4	3	6.7%	-8000	7	-149	16000	7	8.0%	16
5	12	26.7%	-6000	11	-112	20000	. 5	5.7%	20
6	6	13.3%	-4000	63	-75	24000	1	1.1%	24
7	5	11.1%	-2000	121	-37	28000	2	2.3%	28
8	2	4.4%	0	159	0	32000	2	2.3%	32
TOTAL	45	4.4%	2000	128	37	36000	0	0.0%	36
IUIAL	47		4000	73	75	40000	0	0.0%	40
2-GATE S	DOTE	42	6000	20	112	44000	1	1.1%	44
DETECTR	SORTS	FREQ%	8000	12	149	48000	0	0.0%	48
	SUKTS	IKLUA	10000	9	187	52000	1	1.1%	52
8	5	11.9%	12000	1	224	56000	0	0.0%	56
9	7	16.7%	14000	2		60000	0	0.0%	60
10	-	14.3%	16000	0		64000	0	0.0%	64
11	6 7	16.7%	18000	0		68000	0	0.0%	68
12	-	21.4%	20000	0		72000	0	0.0%	72
13	9	9.5%	22000	0		76000	0	0.0%	76
14	4	9.5%	24000	0		80000	0	0.0%	80
15	4	9.34	26000	0	•	84000	0	0.0%	84
TOTAL	42		>28000	0		>84000	8	9.2%	>84
			TOTAL	609	_	TOTAL	87		
			IUIAL	007					
SUMMARY			80		CODIC BY	ONE GATE ONLY	45		
	OT PARTIC					TWO GATES	42		
		CLE EVENTS	58		SUKIS BI	ING GUICS			
D	ISTRIBUTE	DEVENTS	0						

#### REC CODE EXPLANATION

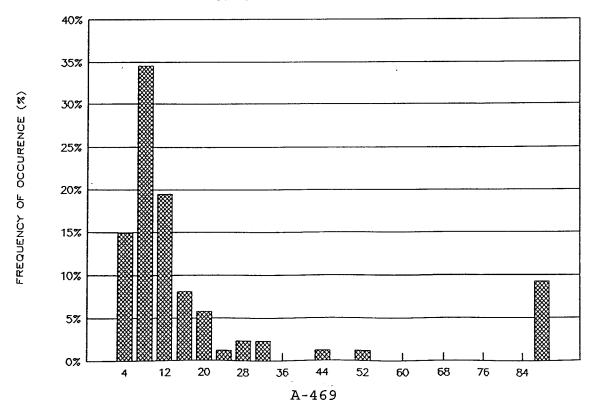
- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 1-LOG DATA FOR 26-Dec-92



# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 26-Dec-92



SORTER 1 21-Nov-92					
		0.70 p (	).04 c/sec		
AVERAGE BACKGROUND COUNT RATE		1.15 tons/mU	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
SORTER SOIL DENSITY		1.65 tons/mU			
GROUND SOIL DENSITY		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	CONTAMINATED	CLEAN	
			0.14 tons	7.6 ton	s
MASS TOTAL			4.7 kg	53.6 kg	
MAXIMUM/SORT			0.7 kg	48.9 kg	
MINIMUM/SORT					
WEIGHT RECOVERY OR VOLUME RECOVERY					98.1%
EQUIVALENT SOIL-IN-GROUND			0.11 ydU	6.0 ydU	6.1 ydU/day
EQUIVALENT SOLE-IN GROOMS					
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	)				
TOTAL			2,834 kBq		
MAXIMUM/SORT			395 kBq	•	
MINIMUM/SORT			2.8 kBq		
HIND IV SON					
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTI	YITY	1,015 kBq	1,198 kBq	
MAXIMUM/SORT			224 kBq	18 kBq	
MINIMUM/SORT			0 Bq	-7 kBq	
SPECIFIC ACTIVITY			7,042 Bq/kg	158 Bq/	kg
<b>3. 23.</b> 1.01.1.01					
WORK HISTORY					
WORK DAY START	07:00 AM		WORK DAY END	05:30 PM	
PLANT START-UP	07:00 AM		PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	08:22 AM		END SOIL PROCESSING		
LUNCH START	11:30 AM		LUNCH PERIOD	0.5 hr	
WORK HOURS			10.0 hr		
AVAILABLE HOURS			10.0 hr		
ACTUAL PROCESS HOUF	S (total 20	-sec records)	0.80 hr		
DOWN-TIME			9.20 hr		
TOTAL SYSTEM PAUSE			8.39 hr		
NONAVAILABLE HOURS			0.0 hr		
START-UP			1.37 hr		
SHUT-DOWN			8.33 hr		
PLANT PERFORMANCE			8.0%		
PRODUCTIVITY			8.0%		
			271		
TOTAL SOIL PROCESSING RECORDS (2-SE		C)	10		
NONPROCESS RECORDS (Test, calibrati	on, etc)		144		
20-SEC PROCESS RECORDS			0 MD>0 & MND=0		
TOTAL SORT			58 AD=0 & MD=0		
NO SORT			0-04 & 0-04 & 6C MD>0&0 <md<mn< td=""><td></td><td>x</td></md<mn<>		x
SOME SORT			0 40 5080 410 411	Diliaxai ilio 4 ilio	•
UNEXPLAINED RECORDS			U	UNEXPLAIN	PAUSE
0 <ad<1kbq &="" md="">0</ad<1kbq>	0			TIME	TIME
AD=0 & N				None	07:00
AD<0 & P		4/ 70/			09:10
ACT_P <5 kBq	18	14.2%			

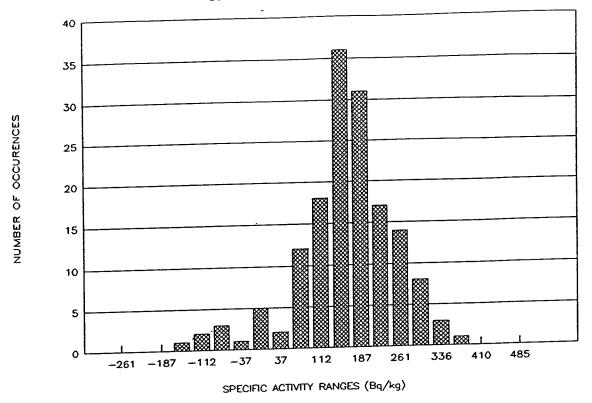
Printed on 01/09/93 at 12:43:50 PM

	2-SEC CO	JNT PERIODS				ERR				
	_	2-SEC RECORD	S WITH S	ORTS		127	(ACT_P >0 kg	3q)		
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR				
			DETECTO		26		72.2%			
		3	DETECTO	RS	8		22.2%			
		4	DETECTO	RS	2		5.6%			
		5	DETECTO	RS	0		0.0%			
		6	DETECTO	RS	0		0.0%			
		7	DETECTO	RS	0		0.0%			
		8	DETECTO	RS	0		0.0%			
		т	OTAL			36				
		NET 2-SEC RE	CORDS WI	TH SORTS		91				
		2-SEC PERIOD	S WITH N	O SORTS		ERR				
		AVG TIME BET	WEEN 2-S	EC SORTS		ERR	sec			
1-GATE	SORTS	67	ACT_ND	NUMBER	SPEC_A		ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(Bq)	(#)		(kBq)
1	1	1.5%	-14000	0	-261		4000	2	1.6%	4
2	7	10.4%	-12000	0	-224		8000	57		8
3	6	9.0%	-10000	0	-187		12000	28	22.0%	12
4	10	14.9%	-8000	1	-149		16000	13	10.2%	16
5	13	19.4%	-6000	2	-112		20000	7	5.5%	20
6	14	20.9%	-4000	3	-75		24000	2	1.6%	24
7	10	14.9%	-2000	1	-37		28000	0	0.0%	28
8	6	9.0%	0	5	0		32000	2	1.6%	32
TOTAL	67		2000	2	37		36000	2	1.6%	36
			4000	12	75		40000	2	1.6%	40
2-GATE	SORTS	60	6000	18	112		44000	1	0.8%	44
DETECTR	SORTS	FREQ%	8000	36	149		48000	0	0.0%	48
8			10000	31	187		52000	1	0.8%	52
9	5	8.3%	12000	17	224		56000	0	0.0%	56
10	6	10.0%	14000	14	261		60000	2	1.6%	60
11	7	11.7%	16000	8	299		64000	0	0.0%	64
12	12	20.0%	18000	3	336		68000	0	0.0%	68
13	12	20.0%	20000	1	373		72000	0	0.0%	72
14	12	20.0%	22000	0	410		76000	0	0.0%	76
15	6	10.0%	24000	0	448		80000	0	0.0%	80
TOTAL	60		26000	0	485		84000	0	0.0%	84
			>28000	0	0		>84000	8	6.3%	>84
			TOTAL	154			TOTAL	127		
SUMMARY	TOTALS									
		ICLE EVENTS	125		SORTS BY			67		
		TICLE EVENTS	91		SORTS BY	TWO GA	TES	60		
!	DISTRIBU	TED EVENTS	0							

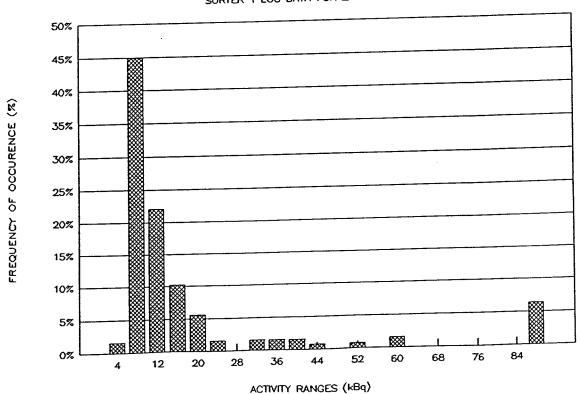
#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 1 LOG DATA FOR 21-Nov-92



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 21-Nov-92



A-472

SORTER 2 21-Nov-92				
AVERAGE BACKGROUND COUNT RATE	0.74	p 0.07 c/sec		
SORTER SOIL DENSITY	1.15 tor	<del>-</del>		
GROUND SOIL DENSITY	1.65 tor			
<b>5</b>		CONTAMINATED	CLEAN	
MASS TOTAL		0.67 tons	7.2 tor	ns
MAXIMUM/SORT		53.6 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	44.2 kg	
WEIGHT RECOVERY OR VOLUME RECOVER	RY			91.4%
EQUIVALENT SOIL-IN-GROUND		0.53 ydU	5.7 ydl	6.2 ydU/day
	175			
PARTICLE ACTIVITY (MAXIMUM ESTIM/	(IE)	3,722 kBq		
TOTAL		209 kBq		
MAXIMUM/SORT		3.4 kBq		•
MINIMUM/SORT		3.4 KBQ		
DISPERSED + PARTICLE (REALISTIC &	ESTIMATE) ACTIVITY	1,694 kBq	1,542 kBq	1
MAXIMUM/SORT		140 kBq	19 kBq	
MINIMUM/SORT		0 Bq	-3 kBd	
SPECIFIC ACTIVITY		2,530 Bq/kg	216 Bq/	kg
WORK HISTORY				
WORK DAY START	07:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	07:00 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	08:22 AM	END SOIL PROCESSING	09:10 AM	
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr	
WORK HOURS		10.0 hr		
AVAILABLE HOURS		10.0 hr		
	URS (total 20-sec recor			
DOWN-TIME	, one (10121 20 000 1000)	9.19 hr		
TOTAL SYSTEM PAUS	:F	8.39 hr		
NONAVAILABLE HOUR		0.0 hr		
START-UP		1.37 hr		
SHUT-DOWN		8.32 hr		
PLANT PERFORMANCE		8.1%		
PRODUCTIVITY		8.1%		
TOTAL SOIL PROCESSING RECORDS (2-		330		
NONPROCESS RECORDS (Test, calibra	tion, etc)	8		
20-SEC PROCESS RECORDS	, and the second	146		
TOTAL SORT		9 MD>0 & MND=0		
NO SORT		44 AD=0 & MD=0		
SOME SORT		93 AD>0&0 <md<mni< td=""><td>Omax&amp;MND<mndma< td=""><td>x</td></mndma<></td></md<mni<>	Omax&MND <mndma< td=""><td>x</td></mndma<>	x
UNEXPLAINED RECOR		0	_	
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		UNEXPLAIN	PAUSE
AD=0 &			TIME	TIME
AD<0 &			None	07:00
ACT_P <5 kBq	23 12.5%			09:10

A-473

2-	SEC COL	INT PERIODS				ERR			
_		2-SEC RECORD	S WITH SO	ORTS		184 (AC	CT_P >0 i	(Bq)	
		2-SEC RECORD			IN >1 DE	TECTOR			
			DETECTOR		49	76.	.6%		
		3	DETECTOR	RS	12	18.	.8%		
			DETECTOR		2	3.	.1%		
		-	DETECTOR		1	1.	.6%		
		_	DETECTOR		0	0.	.0%		
			DETECTOR		0	0.	.0%		
			DETECTOR		0	0.	.0%		
			OTAL			64			
		NET 2-SEC RE		TH SORTS		120			
		2-SEC PERIOD				ERR			
		AVG TIME BET				ERR se	<b>C</b>		
· ·	on TC	97	ACT_ND	NUMBER	SPEC_A		ACT_I	P SC	ЭF
IE SI CTR	ORTS SORTS		(Bq)		(Bq/kg)		(Bq	) (	(#
							400	^	
1	9	9.3%	-14000	0	-261		900		7

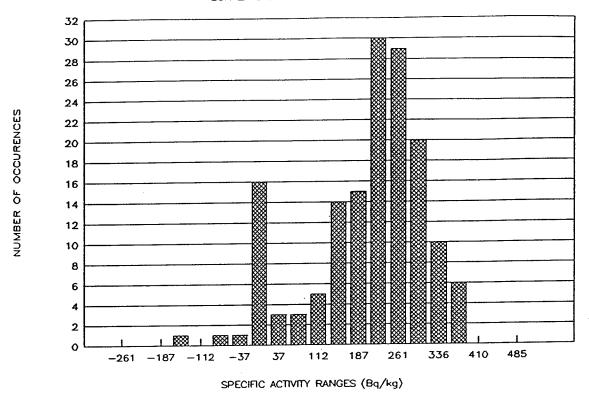
1-GATE S	COPTS	97	ACT_ND	NUMBER	SPEC_A	ACT_P		FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)		(Bq/kg)	(Bq)	(#)		(kBq)
DETECTA	30013								
1	9	9.3%	-14000	0	-261	4000	3	1.6%	4
2	21	21.6%	-12000	0	-224	8000	74	40.2%	8
3	18	18.6%	-10000	0	-187	12000	30	16.3%	12
4	16	16.5%	-8000	1	-149	16000	24	13.0%	16
5	12	12.4%	-6000	0	-112	20000	7	3.8%	20
6	13	13.4%	-4000	1	-75	24000	5	2.7%	24
7	7	7.2%	-2000	1	-37	28000	8		28
8	1	1.0%	0	16	0	32000	3		32
TOTAL	97		2000	3	37	36000	6	3.3%	36
TOTAL	•		4000	3	<b>7</b> 5	40000	2		40
2-GATE	SORTS	87	6000	5	112	44000	1	0.5%	44
DETECTR	SORTS	FREQ%	8000	14	149	48000	1	0.5%	48
8	•••••		10000	15	187	52000	2		52
9	15	17.2%	12000	30	224	56000	2		56
10	15	17.2%	14000	29	261	60000	3		60
11	19	21.8%	16000	20	299	64000	1		64
12	15	17.2%	18000	10	336	68000	1	0.5%	68
13	11	12.6%	20000	6	373	72000	0	0.0%	72
14	9	10.3%	22000	0	410	76000	1	0.5%	76
15	3	3.4%	24000	0	448	80000	1	0.5%	80
TOTAL	87		26000	0	485	84000	0	0.0%	84
TOTAL	0.		>28000	0	0	>84000	9	4.9%	>84
			TOTAL	154		TOTAL	184		
SUMMARY	TOTALS			_					
	HOT PARTIC	IF EVENTS	167		SORTS BY	ONE GATE ONLY	97		
		CLE EVENTS	140		SORTS BY	TWO GATES	87		
	DISTRIBUTE		693						
•									

#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

Printed on 01/09/93 at 01:45:21 PM

SORTER 2 LOG DATA FOR 21-Nov-92



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 21-Nov-92

45%

0%

40%
35%
30%
25%
20%
20%
15%
10%
5%

ACTIVITY RANGES (kBq)

36

28

20

12

76

52

A-475

Note	SORTER 1 20-Nov-92						
REFERENCE DESTITY 1.55 tons/mul  GROUND SOIL DENSITY 1.55 tons/mul  MASS TOTAL 0.28 tons 14,6 tons  TOTAL 0.28 tons 14,6 tons  TOTAL 0.7 kg 5.3.6 kg 5.3.6 kg 4.9.5 kg  MAXIMUM/SORT 0.7 kg 4.9.5 kg  MAXIMUM/SORT 0.22 ydJ 11.5 ydJ 11.8 ydJ/day  PARTICLE ACTIVITY (MAXIMUM ESTIMATE)  TOTAL 0.25 kg kg  MAXIMUM/SORT 0.22 ydJ 11.5 ydJ 11.8 ydJ/day  PARTICLE ACTIVITY (MAXIMUM ESTIMATE)  TOTAL 0.25 kg kg  MAXIMUM/SORT 0.25 kg kg  MAXIMUM/SORT 0.5 kg 11.6 kg 1.970 kg	THE TAXABLE PARTS OF THE PARTS	0.72	p 0.08 c/sec				
MAXIMUM_SORT   1.65 tons/mil   1.65 tons/mil   1.65 tons/mil   1.65 tons   1.66 tons   1			<b>-</b>				
CONTAMINATED   CLEAN   CONTAMINATED   CLEAN							
MAST TOTAL  MATHEM/SORT MINIMUM/SORT MINIMUM/SORT MINIMUM/SORT MINIMUM/SORT  MEGHT RECOVERY OR VOLUME RECOVERY EQUIVALENT SOIL-IN-GROUND  PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL MAXIMUM/SORT MINIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MAXIMUM/SORT MORE DAYSTART MINIMUM/SORT MORE DAYSTART MORE DAYSTART PLANT START-UP MORE DAYSTART MORE DAYSTART MORE DAYSTART MORE MISTORY  MORE MISTORY  MORE MISTORY  MORE MOUSS AVAILABLE HOURS AVAILABLE HOURS ACTUAL PROCESSING MORANT-THE TOTAL SYSTEM PAUSE MONAVAILABLE HOURS AVAILABLE HOURS	GROUND SOIL DENSITY			IINATED	CLEAN		
MAXIMUM/SORT   53.6 kg   55.6 kg   49.5 kg   4	7071		0.28	3 tons	14.6	tons	
MINIMUM/SORT  WEIGHT RECOVERY OR VOLUME RECOVERY EQUIVALENT SOIL-IN-GROUND  PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL MAXIMUM/SORT TOTAL MAXIMUM/SORT MINIMUM/SORT TOTAL MAXIMUM/SORT MINIMUM/SORT SPECIFIC ACTIVITY  MORK DAY START DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY MINIMUM/SORT SPECIFIC ACTIVITY  WORK DAY START DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK HISTORY WORK DAY START DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY START MINIMUM/SORT SPECIFIC ACTIVITY  WORK DAY START DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY START DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY START MINIMUM/SORT SPECIFIC ACTIVITY  MORK DAY START DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY START DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY START DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY START DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY START DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY START DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY START DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY START DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MORK DAY START DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY DISPERSED + PARTICLE (REALISTICATE) ACTIVITY DISPERSED + PARTICLE	_		53.6	kg	53.6	kg	
METION/SWIT OR VOLUME RECOVERY COULDIER RECOVERY COULDIER RECOVERY OR VOLUME RECOVERY COULDIER RECOVERY COULD RECOVERY COULDIER RECOVERY C				-	49.5	kg	
MATCHINE RECOVERY OF VOLUME RECOVERY   0.22 ydd   11.5 ydd   11.8 ydd/day	MINIMUM/SORT			-			
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)   7074   7087   708	THE RECOVERY OF VOLUME PECOVERY						98.1%
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)   TOTAL			0.22	2 ydU	11.5	ydU	11.8 ydU/day
TOTAL  MAXIMEM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMEM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMEM/SORT  MINIMEM/SORT  SPECIFIC ACTIVITY  MORK DAY START  O7:00 AM  UORK DAY START  PLANT START-UP  O7:00 AM  PLANT SHUT-DOWN  START START-UP  O7:00 AM  UNCK DAY END  D5:30 PM  PLANT SHUT-DOWN  D5:30 PM  PLANT SHUT-DOWN  D5:30 PM  END SOIL PROCESSING  10:40 AM  LUNCH PERIOD  05:30 PM  LUNCH PERIOD  05:30 PM  PLANT SHUT-DOWN  D5:30 PM  LUNCH PERIOD  05:30 PM  END SOIL PROCESSING  04:07 PM  LUNCH PERIOD  0.5 hr   TOTAL START  11:30 AM  LUNCH PERIOD  0.5 hr  TOTAL START-UP  SOME BOOK (total 20-sec records)  DOWN-TIME  TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY  15:44 X  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NOWPROCESS RECORDS (1est, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0-4D-0 & MD 0  AD-0 & MD 0  UNEXPLAINED RECORDS  0-4D-0 & MD 0  AD-0 & MD 0  TIME  TIME  TIME  TIME  TIME  TIME  TIME  TIME  O7:04	EGOLANTENI ZOLF-IM-GKOOMS						
TOTAL  MAXIMEM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMEM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMEM/SORT  MINIMEM/SORT  SPECIFIC ACTIVITY  MORK DAY START  O7:00 AM  UORK DAY START  PLANT START-UP  O7:00 AM  PLANT SHUT-DOWN  START START-UP  O7:00 AM  UNCK DAY END  D5:30 PM  PLANT SHUT-DOWN  D5:30 PM  PLANT SHUT-DOWN  D5:30 PM  END SOIL PROCESSING  10:40 AM  LUNCH PERIOD  05:30 PM  LUNCH PERIOD  05:30 PM  PLANT SHUT-DOWN  D5:30 PM  LUNCH PERIOD  05:30 PM  END SOIL PROCESSING  04:07 PM  LUNCH PERIOD  0.5 hr   TOTAL START  11:30 AM  LUNCH PERIOD  0.5 hr  TOTAL START-UP  SOME BOOK (total 20-sec records)  DOWN-TIME  TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY  15:44 X  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NOWPROCESS RECORDS (1est, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0-4D-0 & MD 0  AD-0 & MD 0  UNEXPLAINED RECORDS  0-4D-0 & MD 0  AD-0 & MD 0  TIME  TIME  TIME  TIME  TIME  TIME  TIME  TIME  O7:04	DADTICLE ACTIVITY (MAXIMUM ESTIMAT	E)					
MAXIMUM/SORT  MINIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  MAXIMUM/SORT  MAXIMUM/SORT  SPECIFIC ACTIVITY  MORK DAY START  PLANT START  107:00 AM  PLANT START-UP  START SOIL PROCESSING  10:40 AM  LUNCH PERIOD  0.5 30 PM  PLANT SHUT-DOWN  START SOIL PROCESSING  10:00 hr  AVAILABLE HOURS  ACTUAL PROCESS HOURS (total 20-sec records)  AVAILABLE HOURS  START-UP  START-UP  SOME BAY START  10:00 hr  1.54 hr  8.466 hr  TOTAL SYSTEM PAUSE  MONAVAILABLE HOURS  START-UP  SINT-DOWN  PLANT PERFORMANCE  FRODUCTIVITY  TOTAL SOIL PROCESSING (2-SEC and 20-SEC)  MORPOCESS RECORDS (2-SEC and 20-SEC)  TOTAL SORT  NO SORT  TOTAL SORT  NO SORT  TOTAL SORT  NO SORT  UNEXPLAINED RECORDS  0-4D-0 & MD 0  UNEXPLAINED RECORDS  0-4D-0 & MD 0  UNEXPLAINED RECORDS  11:30 AD-08 MD 0  UNEXPLAINED PAUSE  TIME			2,668	B kBq			
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  MINIMUM/SORT  SPECIFIC ACTIVITY   MORK DAY START  O7:00 AM  WORK DAY END  O5:30 PM  PLANT START-UP  O7:00 AM  END SOIL PROCESSING  LUNCH START  11:30 AM  LUNCH PERIOD  O.5 hr   MORK HOURS  AVAILABLE HOURS  AVAILABLE HOURS  ACTUAL PROCESS HOURS (total 20-sec records)  DOWN-TIME  TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOWN  PLANT SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  START-UP  SHUT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS  TOTAL SOIL PROCESS RECORDS  TOTAL SOIL PROCESS RECORDS  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (1est, calibration, etc)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS  TOTAL SOIL PROCESSING RECORDS  TOTAL SOIT  NO SORT  SOME SORT  UNEXPLAINE PROCESS  O-AD-CLEAP & MOD-O  TIME  TOTAL SOIL  TOTAL SO			647	7 kBq			•
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  MINIMUM/SORT  SPECIFIC ACTIVITY   MORK DAY START  PLANT START UP  START SOIL PROCESS HOURS  START-UP  MORK HOURS  ACTUAL PROCESS HOURS  START-UP  MORK DAY STERT HOURS  START-UP  START-UP  MORK HOURS  ACTUAL PROCESS HOURS  START-UP		•	3.5	kBq			
MAXIMUM/SORT   316 kBq   19 kBq   -9	MINIMON/SORT						
MAXIMUM/SORT   0 Bq	DISPERSED + PARTICLE (REALISTIC ES	TIMATE) ACTIVITY	1,007	7 kBq	1,970	kBq	
MINIMUM/SORT   3,555 Bq/kg   135 Bq/kg			316	s kBq	19	kBq	
### SPECIFIC ACTIVITY    MORK HISTORY   MORK DAY START   07:00 AM   MORK DAY END   05:30 PM   04:07 PM   END SOIL PROCESSING   10:00 hr   10:00			(	) Bq	-9	kBq	
MORK DAY START   O7:00 AM			3,555	Bq/kg	135	Bq/kg	
WORK DAY START   07:00 AM	SECULIO ACCOUNT						
WORK DAY START   07:00 AM	LINEK HISTORY						
PLANT START-UP 07:00 AM PLANT SHUT-DOWN 05:30 PM		07:00 AM	WORK (	DAY END			
START SOIL PROCESSING		07:00 AM					
LUNCH START   11:30 AM   LUNCH PERIOD   0.5 hr		10:40 AM	END SO	OIL PROCESSING			
MORK HOURS   10.0 hr		11:30 AM	LUNCH	PERIOD	0.5	hr	
AVAILABLE HOURS  AVAILABLE HOURS  ACTUAL PROCESS HOURS (total 20-sec records)  DOWN-TIME  TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0-AD<0 & MD 0  AD<0 & MD 0  NO NOP OT:04  TIME	201011 011111						
AVAILABLE HOURS  ACTUAL PROCESS HOURS (total 20-sec records)  DOWN-TIME  TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 AD-0 & MD 0  AD-0 & MD 0  None  07:04  11:30	WORK HOURS			10.0 hr			
ACTUAL PROCESS HOURS (total 20-sec records)  DOWN-TIME  TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOWN  PLANT PERFORMANCE  PRODUCTIVITY  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (Test, calibration, etc)  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  O <ad<1 &="" kbq="" md="">0  AD=0 &amp; MD 0  AD&lt;0 &amp; MD 0  None  07:04  11:30</ad<1>				10.0 hr			
DOMN-TIME   8.46 hr     TOTAL SYSTEM PAUSE   7.50 hr     NONAVAILABLE HOURS   0.0 hr     START-UP   3.68 hr     SHUT-DOMN   1.37 hr     PLANT PERFORMANCE   15.4%     PRODUCTIVITY   15.4%     TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)   421     NONPROCESS RECORDS (Test, calibration, etc)   16     20-SEC PROCESS RECORDS   277     TOTAL SORT   2 MD>0 & MND=0     NO SORT   145 AD=0 & MD=0 & MND>0     SOME SORT   130 AD>08.0		RS (total 20-sec	records)	1.54 hr			
TOTAL SYSTEM PAUSE  NONAVAILABLE HOURS  START-UP  SHUT-DOWN  PLANT PERFORMANCE PRODUCTIVITY  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (2-SEC and 20-SEC)  16  20-SEC PROCESS RECORDS  277  TOTAL SORT  NO SORT  SONE SORT  UNEXPLAINED RECORDS  0 < AD < 0 & MD				8.46 hr			
NONAVAILABLE HOURS   3.68 hr   3.68 hr   3.68 hr   1.37 hr   1.37 hr   1.37 hr   15.4%   15.4%   15.4%   15.4%   15.4%   15.4%   15.4%   16   16   16   16   16   16   16   1				7.50 hr			
START-UP   3.68 hr     SHUT-DOWN   1.37 hr     PLANT PERFORMANCE   15.4%     PRODUCTIVITY   15.4%     TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)   421     NONPROCESS RECORDS   16     20-SEC PROCESS RECORDS   277     TOTAL SORT   2 MD>0 & MND=0     NO SORT   145 AD=0 & MD=0 & MND>0     SOME SORT   130 AD>0&0-MD-MNDmax&MND-MNDmax     UNEXPLAINED RECORDS   0     AD=0 & MD   0     None   07:04     11:30     11:30     TIME   TIME     None   07:04     11:30     Time   Time     None   07:04     Time   Time     Time   T				0.0 hr			
15.4%   16.4%   16.4				3.68 hr			
PRODUCTIVITY  15.4%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 < AD<1kBq & MD>0  AD=0 & MD  0   NONE  TIME  TIME  NONE  NONE  11:30	SHUT-DOWN						
TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 < AD < 1 kBq & MD > 0  AD < 0 & MD  0	PLANT PERFORMANCE						
16   16   16   17   17   17   17   17	PRODUCTIVITY			15.4%			
16   16   16   17   17   17   17   17							
277 20-SEC PROCESS RECORDS TOTAL SORT NO SORT SOME SORT UNEXPLAINED RECORDS 0 <ad<1kbq &="" md="">0 AD=0 &amp; MD 0 AD&lt;0 &amp; MD 0  100 AD&lt;1 &amp; MD 0 AD 1 &amp; MD 0 AD 0 &amp; MD 0 AD 1 &amp; MD 0 AD 0 &amp; MD 0 AD 0 &amp; MD 0 &amp; MND 0 &amp; MN</ad<1kbq>							
TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 < AD < 1 kBq & MD > 0	NONPROCESS RECORDS (Test, calibrat	ion, etc)					
NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 < AD < 1 kBq & MD > 0	20-SEC PROCESS RECORDS						
SOME SORT  UNEXPLAINED RECORDS  0   CAD<1kBq & MD>0  AD=0 & MD  AD<0 & MD  0  AD<0 & MD  0  130 AD>0&0 <md<mndmax&mnd<mndmax 07:04="" 11:30<="" none="" pause="" td="" time="" unexplain=""><td>TOTAL SORT</td><td></td><td></td><td></td><td></td><td></td><td></td></md<mndmax&mnd<mndmax>	TOTAL SORT						
UNEXPLAINED RECORDS  0	NO SORT					D	
O <ad<1kbq &="" md="">0</ad<1kbq>	SOME SORT				UMAX&MND <mn< td=""><td>Umax</td><td></td></mn<>	Umax	
0 <ad<1kbq &="" md="">0</ad<1kbq>	UNEXPLAINED RECORD	s		0			NAMES .
AD=0 & MD	0 <ad<1kbq &="" md="">0</ad<1kbq>	0					
AD<0 & MD U 11:30	AD=0 &	MD 0					
ACT_P <5 kBq 26 18.1%	& D<0	MD 0			None		
	ACT_P <5 kBq	26 18.	1%				11430

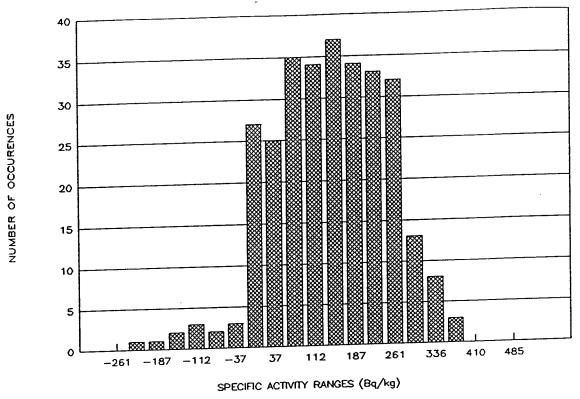
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;	2-SEC COUN	T PERIODS				ERR						15:16
		-SEC RECORD	S WITH S	ORTS	_	144	(ACT_P >	kBq)				
		-SEC RECORD			IN >1 DE		_					
			DETECTO		33		84.6%					
			DETECTO		6		15.4%					
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
			OTAL			39						
	N	ET 2-SEC RE		TH SORTS		105						
		-SEC PERIOD				ERR						
	_	VG TIME BET				ERR	sec					
	'n	10 11112 321										
1-GATE	SORTS	69	ACT_ND	NUMBER	SPEC_A		ACT	_P	SORT	FREQ%	ACT_P	
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(E	(pS	(#)		(kBq)	
1	4	5.8%	-14000	0	-261		40	000	3	2.1%	4	
2	11	15.9%	-12000	1	-224		80	000	75	52.1%	8	
3	9	13.0%	-10000	1	-187		120	000	31	21.5%	12	
4	11	15.9%	-8000	2	-149		160		10	6.9%	16	
5	8	11.6%	-6000	3	-112		200	000	4	2.8%	20	
6	11	15.9%	-4000	2	-75		240	000	7	4.9%	24	
7	10	14.5%	-2000	3	-37		280	000	3	2.1%	28	
8	5	7.2%	0	27	0		320	000	2	1.4%	32	
TOTAL	69		2000	25	37		360		5	3.5%	36	
			4000	35	<b>7</b> 5		400	000	0	0.0%	40	
2-GATE S	SORTS	75	6000	34	112		440	000	0	0.0%	44	
DETECTR	SORTS	FREQ%	8000	37	149		480	000	0	0.0%	48	
8			10000	34	187		520	000	1	0.7%	52	
9	10	13.3%	12000	33	224		560	000	0	0.0%	56	
10	15	20.0%	14000	32	261		600	000	0	0.0%	60	
11	11	14.7%	16000	13	299		640	00	0	0.0%	64	
12	13	17.3%	18000	8	336		680	00	0	0.0%	68	
13	7	9.3%	20000	3	373		720	00	0	0.0%	72	
14	10	13.3%	22000	0	410		760	000	0	0.0%	76	
15	9	12.0%	24000	0	448		800	100	0	0.0%	80	
TOTAL	75		26000	0	485		840	100	0	0.0%	84	
			>28000	0	0		>840	00	3	2.1%	>84	
			TOTAL	293			TOT	AL	144			
SUMMARY	TOTALS											
F	OT PARTIC	LE EVENTS	149		SORTS BY	ONE GA	TE ONLY		69			
4	OLTIPARTIC	CLE EVENTS	115		SORTS BY	TWO GA	TES		75			
D	ISTRIBUTED	EVENTS	159									

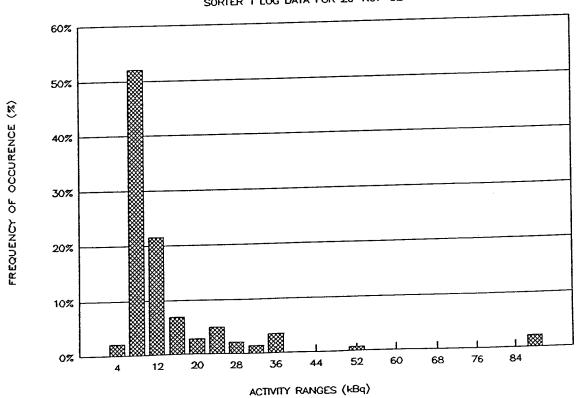
#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

SORTER 1 LOG DATA FOR 20-Nov-92



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 1 LOG DATA FOR 20-Nov-92



A-478

SORTER 2 20-Nov-92								
AVERAGE BACKGROUND COUNT RATE		0.75	p 0.0	7 c/sec				·
SORTER SOIL DENSITY		1.15 t	_					
GROUND SOIL DENSITY		1.65 t	ons/mU					
				CONTAMINA	ATED	CLEAN		
MASS TOTAL				0.59 to	ons	13.8	tons	
MAXIMUM/SORT				53.6 kg	9	53.6	kg	
MINIMUM/SORT				0.7 kg	9	48.2	kg	
WEIGHT RECOVERY OR VOLUME RECOVERY	,							95.9%
FOULVALENT SOIL-IN-GROUND				0.47 yo	du	10.9	ydU	11.4 ydU/day
Edot Meeting Control of the Check							•	, ,
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	E)							
TOTAL				3,376 kE	3q			
MAXIMUM/SORT				503 kE	3q			
MINIMUM/SORT				3.3 kg	3q			
DISPERSED + PARTICLE (REALISTIC ES	TIMATE) ACTIVI	ITY		1,576 kE	Ba	2,329	kBa	
MAXIMUM/SORT				316 kB	•	•	kBq	
MINIMUM/SORT				0 Bc	•		kBq	
SPECIFIC ACTIVITY				2,673 Bo	1/kg	169	Bq/kg	
WORK HISTORY								
WORK DAY START	07:00 AM			WORK DAY	FND	05:30 PM		
PLANT START-UP	07:00 AM			PLANT SHU		05:30 PM		
START SOIL PROCESSING	10:40 AM				PROCESSING			
LUNCH START	11:30 AM			LUNCH PER		0.5	hr	
WORK HOURS					10.0 hr			
AVAILABLE HOURS					10.0 hr			
ACTUAL PROCESS HOU	RS (total 20-s	er reco	ords)		1.49 hr			
DOWN-TIME	(10101 20 0	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	40,		8.51 hr			
TOTAL SYSTEM PAUSE					7.50 hr			
NONAVAILABLE HOURS					0.0 hr			
START-UP					3.68 hr			
SHUT-DOWN					1.40 hr			
PLANT PERFORMANCE					14.9%			
PRODUCTIVITY					14.9%			
TOTAL SOIL PROCESSING RECORDS (2-S	EC and 20-SEC)	)			437			
NONPROCESS RECORDS (Test, calibrat	ion, etc)				19			
20-SEC PROCESS RECORDS				268				
TOTAL SORT				7 MD	>0 & MND=0			
NO SORT				121 AD	=0 & MD=0 &	MND>0		
SOME SORT				140 AD	>0&0<0MD<0MD0	max&MND <mn< td=""><td>Dmax</td><td></td></mn<>	Dmax	
UNEXPLAINED RECORDS	s			0				
0 <ad<1kbq &="" md="">0</ad<1kbq>	0					UNEXPLAIN		PAUSE
AD=0 & I	MD 0					TIME		TIME
AD<0 & I						None		07:04
ACT_P <5 kBq	22	13.0%						11:30

Printed on 01/08/93 at 02:56:12 PM

A-479

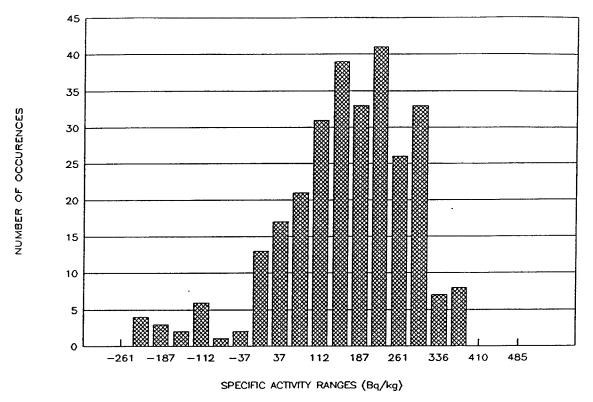
_	050 001117	י הכחומה				ERR						15:1
2-	-SEC COUNT	SEC RECORD	S HITH S	ORTS				>0 kBq)				
		SEC RECORD			IN >1 DE		· -	,				
	2		DETECTO		38		77.6%					
			DETECTO		10		20.4%					
			DETECTO		1		2.0%					
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
			OTAL			49						
	NE	T 2-SEC RE		TH SORTS		120						
		SEC PERIOD				ERR						
		G TIME BET				ERR	sec					
								ACT D	SORT	FREQ%	ACT_P	
1-GATE SO	DRTS '	85	ACT_ND		SPEC_A			ACT_P	(#)	iktav	(kBq)	•
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(Kbd)	
1	5	5.9%	- 14000	0	-261			4000	5	3.0%	4	
2	11	12.9%	-12000	4	-224			8000	75	44.4%	8	
3	12	14.1%	-10000	3	-187			12000	37	21.9%	12	
4	19	22.4%	-8000	2	-149			16000	16	9.5%	16	
5	14	16.5%	-6000	6	-112			20000	10	5.9%	20	
6	11	12.9%	-4000	1	-75			24000	5	3.0%	24	
7	10	11.8%	-2000	2	-37			28000	6	3.6%	28	
8	3	3.5%	0	13	0			32000	4	2.4%	32	
TOTAL	85		2000	17	37			36000	0	0.0%	36	
			4000	21	<b>7</b> 5			40000	0	0.0%	40	
2-GATE SC	ORTS	84	6000	31	112			44000	1	0.6%	44	
DETECTR	SORTS	FREQ%	8000	39	149			48000	0	0.0%	48	
8			10000	33	187			52000	0	0.0%	52	
9	10	11.9%	12000	41	224			56000	0	0.0%	56	
10	10	11.9%	14000	26	261			60000	0	0.0%	60	
11	18	21.4%	16000	33	299			64000	0	0.0%	64	
12	17	20.2%	18000	7	336			68000	1	0.6%	68	
13	12	14.3%	20000	8	373			72000	1	0.6%	72 74	
14	10	11.9%	22000	0	410			76000	2	1.2%	76	
15	. 7	8.3%	24000	0	448			80000	0	0.0%	80	
TOTAL	84		26000	0	485			84000	0	0.0%	84	
			>28000	0	0			84000	6	3.6%	>84	
			TOTAL	287				TOTAL	169			
SUMMARY 1						<b>-</b>		v	85			
	OT PARTICL		170		SORTS BY			.T	84			
		LE EVENTS	169		SORTS BY	TWO G	AIES		<b>0</b> 4			
Di	ISTRIBUTED	EVENTS	541									
DEC CODE	EVDI ANATI	ON										

#### REC CODE EXPLANATION

- 1.00 Source check (Soil on belt)
- 2.00 Empty belt
- 3.00 Test (No process soil)

15:16

SORTER 2 LOG DATA FOR 20-Nov-92



# JA SOIL CLEANUP PLANT HOT PARTICLES SORTER 2 LOG DATA FOR 20-Nov-92

50% 45% 40% FREQUENCY OF OCCURENCE (%) 35% 30% 25% 20% 15% 10% 5% 0% 52 12 20 28 36 60 68 76 84

A-481

ACTIVITY RANGES (kBq)

SORTER 1 16-Nov-92				
AVERAGE BACKGROUND COUNT RATE	0.78 p	0.04 c/sec		
SORTER SOIL DENSITY	1.15 tons/mU			
GROUND SOIL DENSITY	1.65 tons/mU			
anoone core cancer.		CONTAMINATED	CLEAN	
MASS TOTAL		0.50 tons	58.0 tor	ns
MAXIMUM/SORT		5.4 kg	53.6 kg	
MINIMUM/SORT		0.7 kg	48.2 kg	
				99.1%
WEIGHT RECOVERY OR VOLUME RECOVERY		0.40 hi	14.0	
EQUIVALENT SOIL-IN-GROUND		0.40 ydU	46.0 ydl	40.4 you/day
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	E)			
TOTAL	-,	11,335 kBq		
MAXIMUM/SORT		478 kBq		
MINIMUM/SORT	•	2.8 kBq		
DISPERSED + PARTICLE (REALISTIC ES	TIMATE) ACTIVITY	3,748 kBq	1,764 kBc	
MAXIMUM/SORT		329 kBq	13 kBc	
MINIMUM/SORT		0 Bq	-9 kBc	
SPECIFIC ACTIVITY		7,495 Bq/kg	30 Bq/	kg
IMPK HICTORY				
WORK HISTORY WORK DAY START	07:00 AM	WORK DAY END	05:30 PM	
PLANT START-UP	07:00 AM	PLANT SHUT-DOWN	05:30 PM	
START SOIL PROCESSING	08:14 AM	END SOIL PROCESSING		
LUNCH START	11:30 AM	LUNCH PERIOD	0.5 hr	
WORK HOURS		10.0 hr		
AVAILABLE HOURS		10.0 hr		
	RS (total 20-sec records)	6.07 hr 3.93 hr		
DOWN-TIME		3.93 nr 1.65 hr		
TOTAL SYSTEM PAUSE		0.0 hr		
NONAVAILABLE HOURS		1.25 hr		•
START-UP		1.85 hr		•
SHUT-DOWN PLANT PERFORMANCE		60.7%		
PRODUCTIVITY	•	60.7%		
•				
TOTAL SOIL PROCESSING RECORDS (2-SI	EC and 20-SEC)	1,600		
NONPROCESS RECORDS (Test, calibrat	ion, etc)	20		
20-SEC PROCESS RECORDS		1,092		
TOTAL SORT		0 MD>0 & MND=0		
NO SORT		729 AD=0 & MD=0 &		u
SOME SORT		363 AD>0&0 <md<mn0< td=""><td>тах≰мий⊲мийхат</td><td>X</td></md<mn0<>	тах≰мий⊲мийхат	X
UNEXPLAINED RECORDS		0	AMENDI ATM	DALICE
0 <ad<1kbq &="" md="">0</ad<1kbq>	1		UNEXPLAIN	PAUSE Time
AD=0 & N			TIME 15.06.22	07:56
AD<0 & A			15:06:22	07:57
ACT_P <5 kBq	60 11.8%			·····

ERR

	2-3EL L	DONI PERIOUS				EKK					11:13
		2-SEC RECOR	DS WITH S	SORTS	ū	508	(ACT_P >0 kB	q)			12:23
		2-SEC RECOR	DS WITH F	POSITIVES	IN >1 DE1	TECTOR					15:41
			2 DETECTO	ORS	118		72.8%				
			3 DETECTO	)RS	34		21.0%				
			4 DETECTO	DRS	9		5.6%				
			5 DETECTO	RS	1		0.6%				
			6 DETECTO	)RS	0		0.0%				
			7 DETECTO	RS	0		0.0%				
			8 DETECTO	RS	0		0.0%				
			TOTAL			162					
		NET 2-SEC R	ECORDS WI	TH SORTS		346					
		2-SEC PERIO	DS WITH N	O SORTS		ERR					
		AVG TIME BE	TWEEN 2-S	EC SORTS		ERR	sec				
1-GAT	E SORTS	252	AÇT_ND	NUMBER	SPEC_A		ACT_P	SORT	FREQ%	ACT_P	
DETEC			(Bq)		(Bq/kg)		 (Bq)	(#)		(kBq)	
			-		•		•			·	
	1 ;	2 0.8%	-14000	0	-261		4000	17	3.3%	4	
;	2 16	6.3%	-12000	1	-224		8000	213	41.9%	8	
:	3 37	7 14.7%	-10000	4	-187		12000	84	16.5%	12	
4	4 49	19.4%	-8000	7	-149		16000	41	8.1%	16	
!	5 56	22.2%	-6000	· 18	-112		20000	30	5.9%	20	
	6 48	3 19.0%	-4000	38	-75		24000	16	3.1%	24	
;	7 34	13.5%	-2000	113	-37		28000	16	3.1%	28	
1	B 10	4.0%	0	199	0		32000	11	2.2%	32	
TOTAL	L <b>25</b> 2	2	2000	233	37		36000	5	1.0%	36	
			4000	215	75		40000	9	1.8%	40	
2-GATE	SORTS	256	6000	167	112		44000	12	2.4%	44	
DETECT	TR SORTS	FREQ%	8000	69	149		48000	7	1.4%	48	
8	3		10000	29	187		52000	4	0.8%	52	
9	7 6	2.3%	12000	14	224		56000	3	0.6%	56	
10	) 25	9.8%	14000	5	261		60000	4	0.8%	60	
11	1 42	16.4%	16000	0	299		64000	2	0.4%	64	
12	2 51	19.9%	18000	0	336		68000	4	0.8%	68	
13	5 59	23.0%	20000	0	373		72000	3	0.6%	72	
14	46	18.0%	22000	0	410		76000	4	0.8%	76	
15	27	10.5%	24000	0	448		80000	1	0.2%	80	
TOTAL	. 256		26000	0	485		84000	3	0.6%	84	
			>28000	0	0		>84000	19	3.7%	>84	
			TOTAL	1112			TOTAL	508			
SUMMAR	Y TOTALS										
		ICLE EVENTS	492		SORTS BY C	NE GAT	TE ONLY	252			
	MULTIPAR	TICLE EVENTS	256		SORTS BY T	WO GAT	res	256			
	DISTRIBU	TED EVENTS	0								

#### REC CODE EXPLANATION

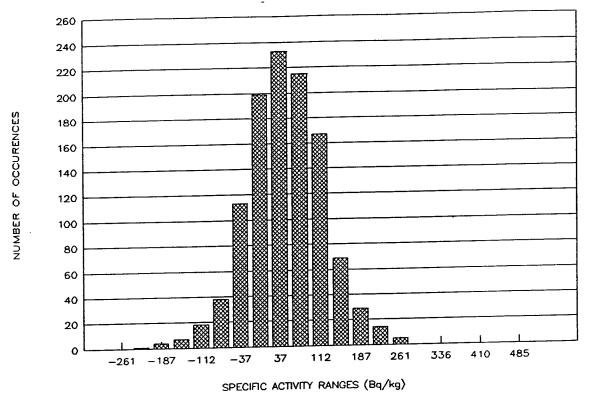
- 1.00 Source check (Soil on belt)
- 2.00 Empty belt

2-SEC COUNT PERIODS

3.00 Test (No process soil)

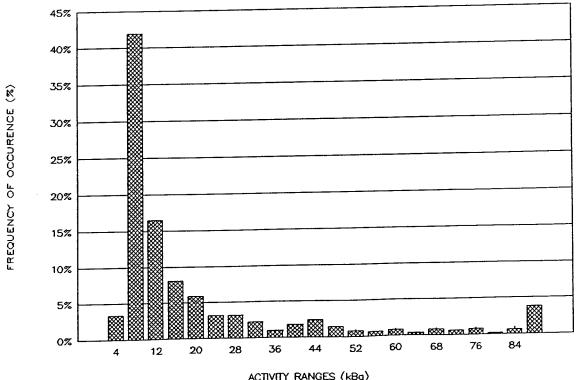
11:13

SORTER 1 LOG DATA FOR 16-Nov-92



# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 1 LOG DATA FOR 16-Nov-92



ACTIVITY RANGES (kBq)

A-484

SORTER 2	16-Nov-92									
AVERAGE BACKGRO	UND COUNT RATE		0.81	P	0.06	c/sec				
SORTER SOIL DEN	SITY		1.15	tons/m	IJ					
GROUND SOIL DEN	SITY		1.65	tons/m	U					
						CONTAM	IINATED	CLEAN		
MASS TOTAL						0.45	tons	58.3	tons	
MAXIMUM/	SORT					4.7	kg kg	53.6	kg	
MINIMUM/	SORT					0.7	kg kg	48.9	kg	
WEIGHT RECOVERY	OR VOLUME RECOVERY									99.2%
EQUIVALENT SOIL						0.36	ydU	46.2	ydU	46.6 ydU/day
	TY (MAXIMUM ESTIMATE	:)				/ DEE	Lo.			
TOTAL						6,255				
MAXIMUM/				•			kBq kB-			
MINIMUM/	SURT					2.9	kBq			
DISPERSED + PAR	TICLE (REALISTIC EST	IMATE) ACTIV	'ITY			2,591	kBq	3,503	kBq	
MAXIMUM/	SORT					151	kBq	15	kBq	
MINIMUM/	SORT					0	Bq	-8	kBq	
SPECIFIC	ACTIVITY					5,701	Bq/kg	60	Bq/kg	
WORK HISTORY										
WORK DAY	START	07:00 AM				WORK D	AY END	05:30 PM		
PLANT STA	ART-UP	07:00 AM				PLANT	SHUT-DOWN	05:30 PM		
START SO	IL PROCESSING	08:14 AM				END SO	IL PROCESSING	03:39 PM		
LUNCH STA	ART	11:30 AM				LUNCH	PERIOD	0.5	hr	
	WORK HOURS						10.0 hr			
	AVAILABLE HOURS						10.0 hr			
	ACTUAL PROCESS HOUR	S (total 20-s	sec re	cords)			6.09 hr			
	DOWN-TIME						3.91 hr			
	TOTAL SYSTEM PAUSE						3.22 hr			
	NONAVAILABLE HOURS						0.0 hr			
	START-UP						1.25 hr			
	SHUT-DOWN						1.84 hr			
	PLANT PERFORMANCE						60.9%			
	PRODUCTIVITY						60.9%			
TOTAL SOLI PROCE	SSING RECORDS (2-SE	C and 20-SEC	,				1,480			
	DS (Test, calibrati	•	•				18			
	OCESS RECORDS	,,				1,097				
	TOTAL SORT					-	MD>0 & MND=0			
	NO SORT						AD=0 & MD=0 8	MND>0		
	SOME SORT						AD>0&0 <md<mnd< td=""><td></td><td>Dmax</td><td></td></md<mnd<>		Dmax	
	UNEXPLAINED RECORDS					0				
	0 <ad<1kbq &="" md="">0</ad<1kbq>	1				,		UNEXPLAIN	P	AUSE
	AD=0 & Mi							TIME		TIME
	AD<0 & MI							15:15:43		07:22
	ACT_P <5 kBq	48	12.5%							07:56

	050 00111	T DEDIONS				ERR						07:57
2		T PERIODS	C 11771 C	ODTO	-		/ACT D	>0 kBq)				09:13
	_	-SEC RECORD			TH -1 DE		(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-o kbd)				11:13
	2				91	ILCION	84.3%					12:23
			DETECTO		17		15.7%					15:41
			DETECTO		0		0.0%					13.41
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
			DETECTO		0		0.0%					
			OTAL	KS.	Ū	108	0.00					
	N	' ET 2-SEC RE		TH SORTS		275						
		-SEC PERIOD				ERR						
	_	VG TIME BET					sec					
	^	AG ITHE BEI	MCCH 2-3	LC SOKIS		<b>—</b> 1111						
1-GATE S	ORTS	196	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQX	ACT_P	
DETECTR	SORTS	FREQX	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)	
	_				2/4			<b>,,,,,</b>	42	3.1%	4	
1	5		-14000	1	-261			4000 8000	12 157		8	
2	21		-12000	2	-224 -197			12000	74	19.3%	12	
3	42			1	-187 -1/0			16000	34	8.9%	16	
4	54	27.6%	-8000	5 7	-149 -112			20000	21	5.5%	20	
5	38	19.4%	-6000	23	-75			24000	20	5.2%	24	
6	22	11.2%	-4000 -2000	<i>2</i> 3	-37			28000	12		28	
7	12	6.1%	-2000	126	0			32000	4	1.0%	32	
8	2	1.0%	2000	201	37			36000	3		36	
TOTAL	196		4000	216	75			40000	10		40	
2-GATE S	OPTS	187	6000	186	112			44000	6		44	
DETECTR	SORTS	FREQ%	8000	150	149			48000	5	1.3%	48	
8	30113	11/04/	10000	73	187			52000	2		52	
9	8	4.3%	12000	32	224			56000	3		56	
10	26	13.9%	14000	11	261			60000	4	1.0%	60	
11	50	26.7%	16000	4	299			64000	1	0.3%	64	
12	47	25.1%	18000	0	336			68000	2	0.5%	68	
13	35	18.7%	20000	0	373			72000	4	1.0%	72	
14	15	8.0%	22000	0	410			76000	3	0.8%	76	
15	6	3.2%	24000	0	448			80000	2	0.5%	80	
TOTAL	187		26000	0	485			84000	0	0.0%	84	
_			>28000	0	0		>	84000	4	1.0%	>84	
			TOTAL	1115				TOTAL	383			
SUMMARY	TOTALS											
H	OT PARTIC	LE EVENTS	372		SORTS BY	ONE G	ATE ONL	.Y	196			
H	ULTIPARTI	CLE EVENTS	305		SORTS BY	TWO G	ATES		187			
D	ISTRIBUTE	D EVENTS	0									

#### REC CODE EXPLANATION

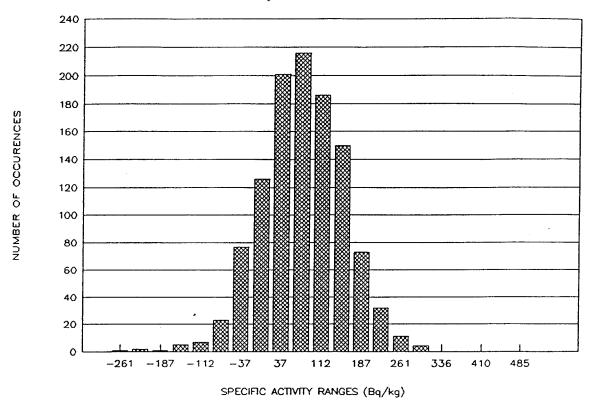
1.00 Source check (Soil on belt)

2.00 Empty belt

3.00 Test (No process soil)

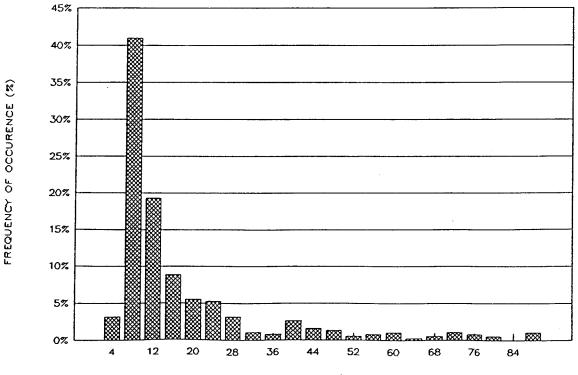
2

SORTER 2\_LOG DATA FOR 16-Nov-92



# JA SOIL CLEANUP PLANT HOT PARTICLES

SORTER 2 LOG DATA FOR 16-Nov-92



ACTIVITY RANGES (kBq)

A-487

SORTER 1 14-Nov-92	-		
AVERAGE BACKGROUND COUNT RATE	0.78 ± 0.0	)5 c/sec	
SORTER SOIL DENSITY	1.15 tons/m³		
GROUND SOIL DENSITY	1.65 tons/m³		
		CONTAMINATED	CLEAN
MASS TOTAL		<b>0.80</b> tons	65.0 tons
MAXIMUM/SORT		56.2 kg	53.6 kg
MINIMUM/SORT		0.7 kg	48.2 kg
WEIGHT RECOVERY OR VOLUME RECOVERY			98.8%
EQUIVALENT SOIL-IN-GROUND		0.63 yd³	51.5 yd³ 52.1 yd³/day
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)		11,986 kBq	
TOTAL	•	325 kBq	
MAXIMUM/SORT		3.0 kBq	
MINIMUM/SORT		3.0 KB4	
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTI	VITY	4,383 kBq	5,574 kBq
MAXIMUM/SORT		163 kBq	19 kBq
MINIMUM/SORT		0 Bq	-14 kBq
SPECIFIC ACTIVITY		5,491 Bq/kg	86 Bq/kg
<b>5. 55. 15</b> 1			
WORK DAY			
WORK DAY START 07:00 AM			
PROCESSING START 07:43 AM		0.72 hr	
PLANT STARTUP TIME		0.72 111	
PROCESSING END 04:25 PM HORK DAY END 05:30 PM			
MONIX DITT CITY		1.09 hr	
PLANT SHUTDOWN TIME			
LUNCH PERIOD		0.5 hr	
WORK HOURS		10.0 hr	
MAX PROCESS HOURS (END-START)		8.70 hr	
ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT	PERIODS)	6.82 hr	
TOTAL SYSTEM PAUSE TIME		0.57 hr	
TOTAL DOWNTIME (MAX-ACTUAL)		1.88 hr	
TIME UTILIZATION (ACTUAL HRS/WORK HRS)		68.1%	
TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SE	<b>C)</b>	1,861	
NONPROCESS RECORDS (Test, calibration, etc)		9	
20-SEC PROCESS RECORDS		1,227	
TOTAL SORT		1 MD>0 & MND=0	
NO SORT		716 AD=0 & MD=0	
SOME SORT		510 AD>0&0 <md<mn< td=""><td>Dmax&amp;MND<mndmax< td=""></mndmax<></td></md<mn<>	Dmax&MND <mndmax< td=""></mndmax<>
UNEXPLAINED RECORDS		0	
0 <ad<1kbq &="" md="">0 3</ad<1kbq>			
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0 AD<0 & MD 0

88 13.9% ACT\_P <5 kBq 2-SEC COUNT PERIODS 12,270 2-SEC RECORDS WITH SORTS 634 (ACT\_P >0 kBq) 2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR 77.3% 150 2 DETECTORS 3 DETECTORS 40 20.6% 2.1% 4 4 DETECTORS 5 DETECTORS 0 0.0% 0.0% 6 DETECTORS 0 0.0% 0 7 DETECTORS 8 DETECTORS 0.0% 194 TOTAL NET 2-SEC RECORDS WITH SORTS 440 2-SEC PERIODS WITH NO SORTS 11,830 AVG TIME BETWEEN 2-SEC SORTS 55.8 sec 710 ACT NO NUMBER SPEC A

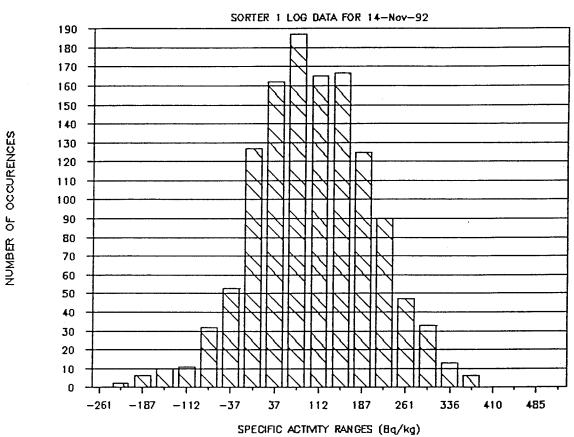
1-GATE S	ORTS	318	ACT_ND	NUMBER	SPEC_A	ACT_P	SORT	FREQ%	ACT_P
DETECTR	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	8	2.5%	-14000	0	-261	4000	23	3.6%	4
2	27	8.5%	-12000	2	-224	8000	256	40.4%	8
3	52	16.4%	-10000	6	-187	12000	119	18.8%	12
4	61	19.2%	-8000	10	-149	16000	57	9.0%	16
5	56	17.6%	-6000	11	-112	20000	39	6.2%	20
6	65	20.4%	-4000	32	-75	24000	22	3.5%	24
7	40	12.6%	-2000	53	-37	28000	15	2.4%	28
8	9	2.8%	0	127	0	32000	15	2.4%	32
TOTAL	318		2000	162	37	36000	13	2.1%	36
			4000	187	75	40000	10	1.6%	40
2-GATE SO	ORTS	316	6000	165	112	44000	6	0.9%	44
DETECTR	SORTS	FREQ%	8000	167	149	48000	7	1.1%	48
8			10000	125	187	52000	3	0.5%	52
9	12	3.8%	12000	90	224	56000	2	0.3%	56
10	41	13.0%	14000	47	261	60000	4	0.6%	60
11	60	19.0%	16000	33	299	64000	5	0.8%	64
12	56	17.7%	18000	13	336	68000	4	0.6%	68
13	64	20.3%	20000	6	373	72000	6	0.9%	72
14	52	16.5%	22000	0	410	76000	1	0.2%	76
15	31	9.8%	24000	0	448	80000	2	0.3%	80
TOTAL	316		26000	0	485	84000	3	0.5%	84
			>28000	0	0	>84000	22	3.5%	>84
			TOTAL	1236		TOTAL	634		
HF	PΕ	622		GATE1	634				
MF		486		GATE2	316				

DISE 83

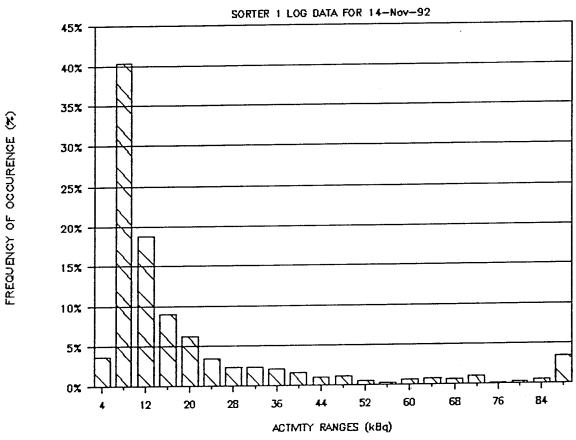
REC CODE EXPLANATION

1.00 Source check (Soil on belt)

2.00 Empty belt3.00 Test (No process soil)



# JA SOIL CLEANUP PLANT HOT PARTICLES



SORTER 2 14-Nov-92	-		
AVERAGE BACKGROUND COUNT RATE	0.79 ±	0.04 c/sec	
SORTER SOIL DENSITY	1.15 tons/m³		
GROUND SOIL DENSITY	1.65 tons/m³		
		CONTAMINATED	CLEAN
MASS TOTAL		1.16 tons	64.2 tons
MAXIMUM/SORT		53.6 kg	53.6 kg
MINIMUM/SORT		0.7 kg	48.2 kg
WEIGHT RECOVERY OR VOLUME RECOVERY			98.2%
EQUIVALENT SOIL-IN-GROUND		0.92 yd3	50.9 yd <sup>3</sup> 51.8 yd <sup>3</sup> /day
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)			
TOTAL		8,954 kBq	•
MAXIMUM/SORT		196 kBq	
MINIMUM/SORT		2.7 kBq	
DISPERSED + PARTICLE (REALISTIC ESTI	MATE) ACTIVITY	4,056 kBq	6,355 kBq
MAXIMUM/SORT		131 kBq	20 kBq
MINIMUM/SORT		0 Bq	-16 kBq
SPECIFIC ACTIVITY		3,508 Bq/kg	99 Bq/kg
WORK DAY		·	
WORK DAY START	07:00 AM		
PROCESSING START	07:43 AM		
PLANT STARTUP TIME		0.72 hr	
PROCESSING END	04:25 PM		
WORK DAY END	05:30 PM		
PLANT SHUTDOWN TIME		1.09 hr	
LUNCH PERIOD		0.5 hr	
WORK HOURS		10.0 hr	
MAX PROCESS HOURS (END-START)		8.70 hr	
ACTUAL PROCESS HOURS (TOTAL 2)	O-SEC SORT PERIODS)	6.78 hr	
TOTAL SYSTEM PAUSE TIME		0.56 hr	
TOTAL DOWNTIME (MAX-ACTUAL)		1.92 hr	
TIME UTILIZATION (ACTUAL HRS/	NORK HRS)	67.7%	
TOTAL SOIL PROCESSING RECORDS (2-SEC	and 20-SEC)	1,790	
NONPROCESS RECORDS (Test, calibration	n, etc)	11	
20-SEC PROCESS RECORDS		1,220	
TOTAL SORT		0=0MM & 0<0M 8	
NO SORT		677 AD=0 & MD=0	& MND>0
SOME SORT		536 AD>0&0 <md<mn< td=""><td>Dmax&amp;MND<mndmax< td=""></mndmax<></td></md<mn<>	Dmax&MND <mndmax< td=""></mndmax<>
UNEXPLAINED RECORDS		(1)	
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AD=0 & MD	0 .		
AD < 0 & MD	0		

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		ACT_P <5 kBq	1	80	_14.0	ζ.				
2.	SEC CO	UNT PERIODS				12,200				
_		2-SEC RECORD	S WITH S	ORTS		570	(ACT_P	>0 kBq)		
		2-SEC RECORD			IN >1 DE	ETECTOR				
		2	DETECTO	RS	125		82.2%			
		3	DETECTO	RS	23		15.1%			
		4	DETECTO	RS	3		2.0%			
		5	DETECTO	RS	1		0.7%			
		6	DETECTO	RS	0		0.0%			
		7	DETECTO	RS	0		0.0%			
		8	DETECTO	RS	0		0.0%			
		τ	OTAL			152				
		NET 2-SEC RE				418				
		2-SEC PERIOD				11,782			•	
		AVG TIME BET	WEEN 2-SI	EC SORTS		58.4	sec			
1-GATE SC	OD T C	298	ACT ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%
DETECTR	SORTS		(Bq)		(Bq/kg)			(Bq)	(#)	
DETECTA	30113	IREAR	(54)		ν-φ σ.					
1	11	3.7%	-14000	2	-261			4000	18	3.2%
2	40		-12000	2	-224			8000	254	44.6%
3	55		-10000	5	-187			12000	96	16.8%
4	57		-8000	8	-149			16000	61	10.7%
5	67		-6000	7	-112			20000	38	6.7%
6	39	13.1%	-4000	12	-75			24000	18	3.2%
7	24	8.1%	-2000	37	-37			28000	15	2.6%
8	5	1.7%	0	100	0			32000	13	
TOTAL	298		2000	157	37			36000	11	1.9%
			4000	189	75			40000	7	
2-GATE SC	ORTS	272	6000	201	112			44000	2	0.4%
								10000		η οΨ

HPE	554	GATE1	570
MPE	543	GATE2	272
DISE	628		

FREQ%

6.3%

14.0%

24.6%

18.4%

21.7%

9.6%

5.5%

>28000

TOTAL

REC CODE EXPLANATION
1.00 Source check (Soil on belt)

ACT\_P

(kBq)

>84

>84000

TOTAL

0.9%

0.5%

0.4%

0.5%

0.4%

0.2%

0.9%

0.2%

0.0%

0.5%

2.1%

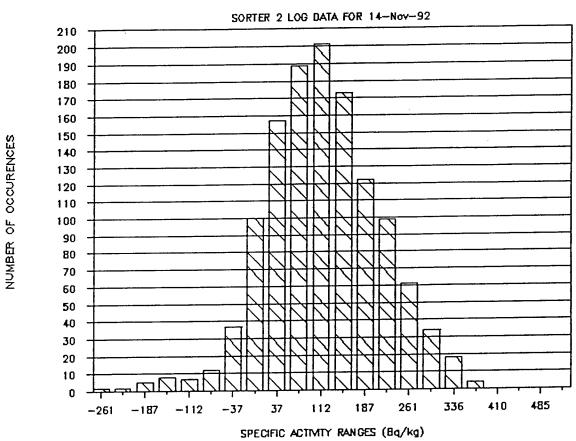
DETECTR

· 8

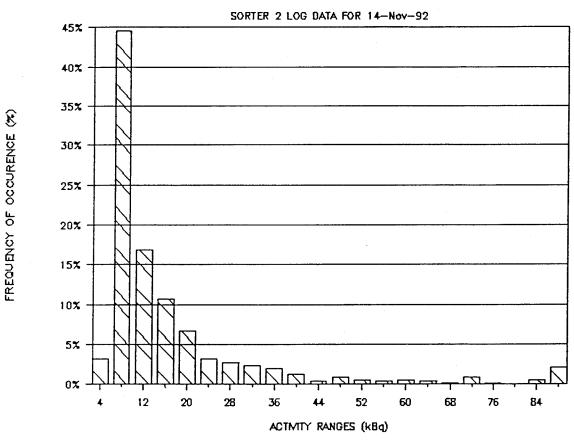
TOTAL

SORTS

2.00 Empty belt3.00 Test (No process soil)



# JA SOIL CLEANUP PLANT HOT PARTICLES



SORTER 1 07-Nov-92	-		
AVERAGE BACKGROUND COUNT RATE	0.80 ± 0.0	01 c/sec	
SORTER SOIL DENSITY	1.15 tons/m <sup>3</sup>		
GROUND SOIL DENSITY	1.65 tons/m <sup>3</sup>		
dicons cost constraint		CONTAMINATED	CLEAN
MASS TOTAL		2.41 tons	71.1 tons
MAXIMUM/SORT		53.6 kg	53.6 kg
MINIMUM/SORT		0.7 kg	45.5 kg
			a
WEIGHT RECOVERY OR VOLUME RECOVERY			96.7%
EQUIVALENT SOIL-IN-GROUND		1.91 yd³	56.4 yd <sup>3</sup> 58.3 yd <sup>3</sup> /day
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)	)		
TOTAL		35,918 kBq	
MAXIMUM/SORT		2,358 kBq	·
MINIMUM/SORT		2.7 kBq	
DISPERSED + PARTICLE (REALISTIC ESTI	IMATE) ACTIVITY	13,034 kBq	8,862 kBq
MAXIMUM/SORT		1245 kBq	18 kBq
MINIMUM/SORT		0 Bq	-15 kBq
SPECIFIC ACTIVITY		5,411 Bq/kg	125 Bq/kg
WORK DAY			
	07:00 AM		
PROCESSING START	07:48 AM		
PLANT STARTUP TIME		0.82 hr	
PROCESSING END	04:25 PM		
WORK DAY END	05:30 PM		
PLANT SHUTDOWN TIME		1.09 hr	
ALMICH DERIVO		0.5 hr	
LUNCH PERIOD WORK HOURS		10.0 hr	
MAX PROCESS HOURS (END-START)		8.61 hr	
ACTUAL PROCESS HOURS (TOTAL 2		7.63 hr	
TOTAL SYSTEM PAUSE TIME		0.00 hr	
TOTAL DOWNTIME (MAX-ACTUAL)		0.98 hr	
TIME UTILIZATION (ACTUAL HRS/	WORK HRS)	76.2%	
TOTAL SOIL PROCESSING RECORDS (2-SEC	and 20-SEC)	3,251	
NONPROCESS RECORDS (Test, calibration	on, etc)	10	
20-SEC PROCESS RECORDS		1,373	
TOTAL SORT		10 MD>0 & MND=0	)
NO SORT		440 AD=0 & MD=0	& MND>0
SOME SORT		922 AD>0&0 <md<mn< td=""><td>IDmax&amp;MND<mndmax< td=""></mndmax<></td></md<mn<>	IDmax&MND <mndmax< td=""></mndmax<>
UNEXPLAINED RECORDS		1	•
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AD=0 & MD	0		

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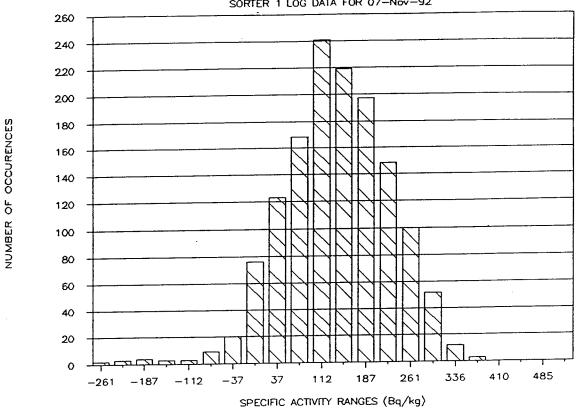
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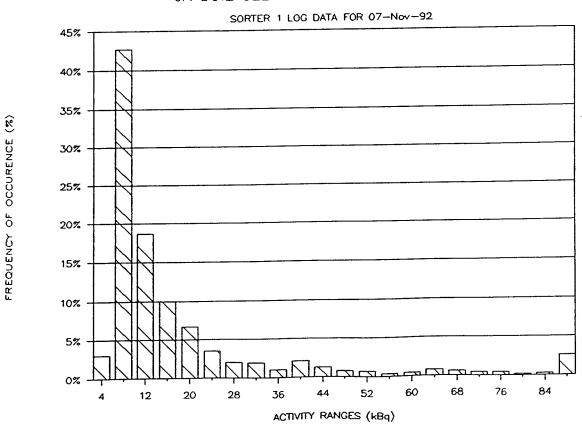
13,730

		2-SEC RECORD	S WITH S	ORTS		1,878 AP>0			
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 D	ETECTOR			
		2	DETECTO	RS	431	82.6%			
		3	DETECTO	RS	80	15.3%			
		4	DETECTO	RS	9	1.7%			
		5	DETECTO	RS	2	0.4%			
		6	DETECTO	RS	0	0.0%			
		7	DETECTO	RS	0	0.0%			
		8	DETECTO	RS	0	0.0%			
		ī	OTAL			522			
		NET 2-SEC RE	CUBUS III	TH SORTS		1,356			
		2-SEC PERIOD				12,374			
		AVG TIME BET				20.3 sec			
		AVG TIME DET	WCCN 2 3	EC JONIO		20.5 300	•		
1-GATE SO	ORTS	932	ACT_ND	NUMBER	SPEC_A	ACT	_P SORT	FREQ%	ACT_P
DETECTO	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(8	q) (#)		(kBq)
1	17	1 82	-14000	2	-261	40	00 56	3.0%	4
2	62		-12000	3			00 802		8
3	126		-10000	4		120			12
4	149	16.0%	-8000	3		160			16
5	168	18.0%	-6000	3		200			20
6	174	18.7%		9		240			24
7	166	17.8%	-2000	20	-37	280	00 38		28
8	70	7.5%	0	76	0	320			32
TOTAL	932		2000	123	37	360	00 19	1.0%	36
			4000	168	75	400			40
2-GATE SC	RTS	946	6000	241	112	440	00 24	1.3%	44
DETECTO	SORTS	FREQ%	8000	219	149	480	00 14	0.7%	48
8			10000	197	187	520	00 13	0.7%	52
9	32	3.4%	12000	148	224	560	00 6	0.3%	56
10	99	10.5%	14000	100	261	600	8 00	0.4%	60
11	153	16.2%	16000	52	299	640	00 14	0.7%	64
12	177	18.7%	18000	12	336	680	00 11	0.6%	68
13	171	18.1%	20000	3	373	720	00 7	0.4%	72
14	175	18.5%	22000	0	410	760	8 00	0.4%	76
15	139	14.7%	24000	0	448	800	00 3	0.2%	80
TOTAL	946		26000	0	485	840	00 4	0.2%	84
			>28000	0	0	>840	00 48	2.6%	>84
			TOTAL	1383		TOT	AL 1878		
HP	F	1852	,	GATE1	1878				
MP		1069		SATE2	946				
DI		762	`		, 45				

REC CODE EXPLANATION

SORTER 1 LOG DATA FOR 07-Nov-92





A-500

SORTER 2	07-Nov-92									
JOHNER E	0. 1101 /2		-							
AVERAGE BACKGRO	UND COUNT RATE		0.83	±	0.05	c/sec				
SORTER SOIL DEN	SITY		1.15	tons/m³						
GROUND SOIL DEN	SITY		1.65	tons/m³	3					
						CONTAH	INATED	CLEAN	i	
MASS TOTAL						4.94	tons	67.6	tons	
MAXIMUM/	SORT					53.6	kg	53.6	kg	
MINIMUM/	SORT					0.7	kg	42.8	kg	
LETAUT DECOUEDY	OR MOLLINE RECOVERY									07.74
EQUIVALENT SOIL	OR VOLUME RECOVERY					7 01		E7 (		93.2%
EGOTANTENT SOLL	- I M-RKOOND					3.91	ya,	23.0	yd³	57.5 yd3/day
PARTICLE ACTIVIT	TY (MAXIMUM ESTIMAT	E)								
TOTAL						62,966	kBq			
MAXIMUH/S	SORT					11,721	*			
MINIMUM/S	SORT						k8q			
	FICLE (REALISTIC ES	TIMATE) ACTIVI	TY			26,683	•	13,175		
MAXIMUM/S						12538	= '		kBq	
MINIMUM/S							Bq		kBq	
SPECIFIC	ACTIVITY					5,406	Bq/kg	195	Bq/kg	
WORK DAY										
WORK DAY	START	07:00 AM								
PROCESSIA	IG START	07:49 AM								
PLANT STA	RTUP TIME						0.82 hr			
PROCESSIA	IG END	04:23 PM								
WORK DAY	END	05:30 PM								
PLANT SHU	ITDOWN TIME						1.12 hr			
LUNCH PER							0.5 hr			
WORK HOUR							10.0 hr			
	SS HOURS (END-START						8.57 hr			
	OCESS HOURS (TOTAL	20-SEC SORT P	ERIODS	<b>()</b>			7.52 hr			
	TEM PAUSE TIME						0.06 hr			
	NTIME (MAX-ACTUAL)						1.05 hr			
TIME UTIL	IZATION (ACTUAL HRS	S/WORK HRS)					75.2%			
TOTAL SOIL PROCE	SSING RECORDS (2-SE	C and 20-SEC)				2,916				
NONPROCESS RECOR	DS (Test, calibrati	on, etc)				19				
30 656 85	00500 0500000					1 751				
	OCESS RECORDS					1,354	MU>U & MAD=0			
	TOTAL SORT NO SORT						MD>0 & MND=0	MUDSA		
	SOME SORT						& O=OM & O=OA		lDmay	
	SOME SOK! UNEXPLAINED RECORDS						AD>0&0 <ad≀< td=""><td></td><td>WINAX</td><td></td></ad≀<>		WINAX	
	DREAFERINED RECORDS	,				(1)				

0<AD<1kBq & MO>0

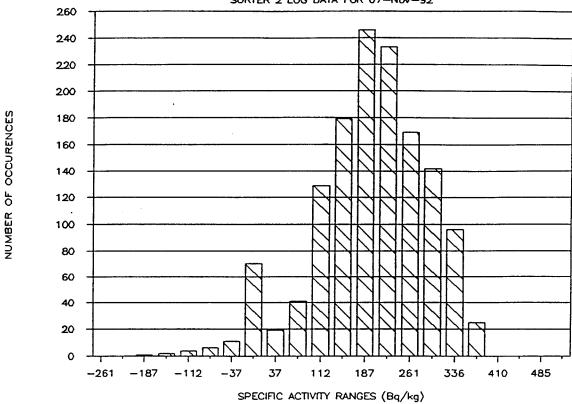
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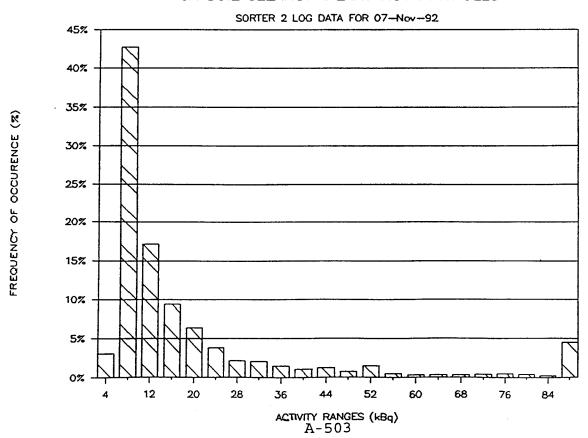
13,540

-	020 00	2-SEC RECORD	S WITH S	SORTS		1,562 AP>0			
		2-SEC RECORD			IN >1 DE				
			DETECT		369	76.4%			
			DETECT		91	18.8%			
			DETECT		16	3.3%			
					3	0.6%			
			DETECT		1	0.2%			
			DETECT			0.2%			
			DETECT		1				
			DETECTO	DRS	1	0.2%			
		. 1	OTAL			483			
						1,079			
		NET 2+SEC RE				=			
		2-SEC PERIOD				12,461			
		AVG TIME BET	WEEN 2-	SEC SORIS		25.1 sec			
4 0475 0	0076	792	ACT_ND	NI MOED	SPEC_A	A.C	T_P SORT	FREQX	ACT_P
1-GATE S			-		(Bq/kg)		Bq) (#)		(kBq)
DETECTO	SORTS	FREQX	(Bq)	(#/	(bq/kg/	`			• • • • • • • • • • • • • • • • • • • •
1	33	4.2%	-14000	0	-261	4	000 48	3.1%	4
2	134	16.9%		0		8	000 667	42.7%	8
3	177	22.3%	-10000	1	-187	12	268	17.2%	12
4	164	20.7%	-8000	2	-149		000 146		16
5	123	15.5%	-6000	4	-112		000 99		20
6	رے، 95	12.0%	-4000	6	-75		000 60		24
7	53	6.7%	-2000	11	-37		000 34		28
8	13	1.6%	0	70	0		000 32		32
	792	1.0%	2000	19	37		000 23		36
TOTAL	172		4000	41	75		000 16		40
2-CATE 60	DOTE	770	6000	129	112		000 19		44
2-GATE SO	SORTS	FREQ%	8000	179	149		000 12		48
	30K13	FREGA	10000	246	187		000 24		52
8	01	10 EV		233	224		000 7		56
9	81	10.5%	12000	169	261		000 5	0.3%	60
10	144	18.7%	14000		299		000 5	0.3%	64
11	188	24.4%	16000	142			000 5	0.3%	68
12	140	18.2%	18000	96	336			0.4%	72
13	98	12.7%	20000	25	373				76
14	86	11.2%	22000	0	410				80
15	33	4.3%	24000	0	448				84
TOTAL	770		26000	0	485				
			>28000	0	0		000 70	4.5%	>84
			TOTAL	1373		TO	TAL 1562		
	\ <b>C</b>	4/07		CATES	1562				
HP		- 1497		GATE1	770				
MP		1306		GATE2	770				
DI	SE	4569							

REC CODE EXPLANATION

SORTER 2 LOG DATA FOR 07-Nov-92





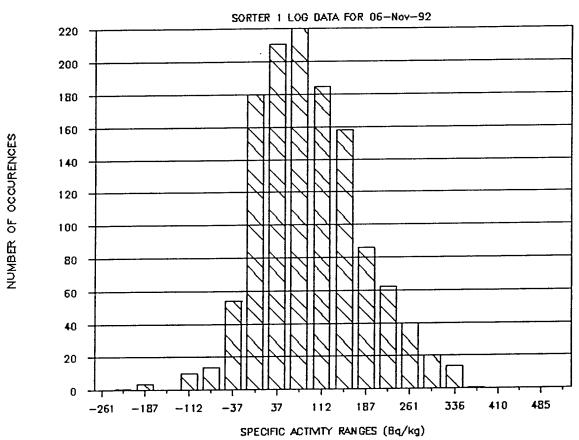
SORTER 1 06-Nov-92	-		
AVERAGE BACKGROUND COUNT RATE	0.80 ± 0.	02 c/sec	
SORTER SOIL DENSITY	1.15 tons/m³		
GROUND SOIL DENSITY	1.65 tons/m <sup>3</sup>		
		CONTAMINATED	CLEAN
MASS TOTAL		2.64 tons	64.4 tons
MAXIMUM/SORT		53.6 kg	53.6 kg
MINIMUM/SORT		0.7 kg	43.5 kg
			96.1%
WEIGHT RECOVERY OR VOLUME RECOVERY		2.10 yd3	51.1 yd <sup>3</sup> 53.2 yd <sup>3</sup> /day
EQUIVALENT SOIL-IN-GROUND		21.0 /2	
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)			
TOTAL		21,672 kBq	
MAXIMUM/SORT		1,658 kBq	
MINIMUM/SORT		3.0 kBq	
		8,315 kBq	4,949 kBq
DISPERSED + PARTICLE (REALISTIC ESTIN	MATE) ACTIVITY	1016 kBq	18 kBq
MAXIMUM/SORT		0 Bq	-10 kBq
MINIMUM/SORT		3,145 Bq/kg	77 Bq/kg
SPECIFIC ACTIVITY		5,145 BQ/ Kg	54) %3
WORK DAY			
WORK DAY START	7:00 AM		
PROCESSING START	09:56 AM		
PLANT STARTUP TIME		2.94 hr	
PROCESSING END (	04:53 PM		
WORK DAY END	05:30 PM		
PLANT SHUTDOWN TIME		0.62 hr	
LINET DERICO		0.5 hr	
LUNCH PERIOD WORK HOURS		10.0 hr	
MAX PROCESS HOURS (END-START)		6.95 hr	
ACTUAL PROCESS HOURS (TOTAL 20	)-SEC SORT PERIODS)	6.96 hr	
TOTAL SYSTEM PAUSE TIME	, 020 00 12	0.00 hr	
TOTAL DOWNTIME (MAX-ACTUAL)		-0.01 hr	
TIME UTILIZATION (ACTUAL HRS/	ORK HRS)	69.5%	
	4 30 ecc)	2,174	
TOTAL SOIL PROCESSING RECORDS (2-SEC		8	
NONPROCESS RECORDS (Test, calibration	i, etc)	J	
20-SEC PROCESS RECORDS		1,252	
TOTAL SORT		34 MD>0 & MND=0	
NO SORT		714 AD=0 & MD=0	
SOME SORT			NDmax&MND <mndmax< td=""></mndmax<>
UNEXPLAINED RECORDS		0	•
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AD<0 & MO	0		

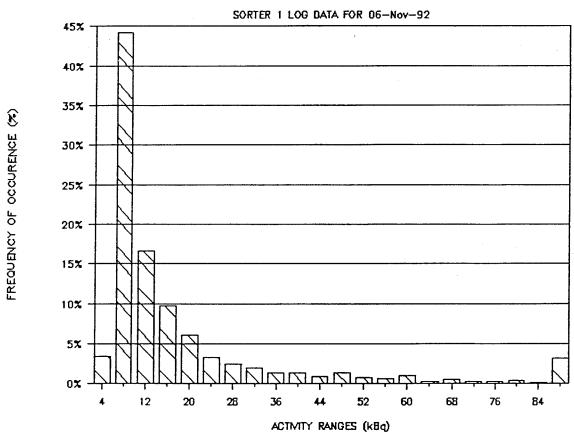
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12,520

~	"SEL CL	ONI PERIODS				12,320			
		2-SEC RECORD	S HITH S	SORTS		922 AP>0			
		2-SEC RECORD	S WITH F	POSITIVES	IN >1 D	ETECTOR			
		7	2 DETECTO	ORS	225	83.0%			
		3	DETECTO	)RS	41	15.1%			
		4	DETECTO	RS	5	1.8%			
		9	DETECTO	RS	0	0.0%			
		6	DETECTO	RS	0	0.0%			
		7	DETECTO	RS	0	0.0%			
		8	B DETECTO	RS	0	0.0%			
		1	OTAL			271			
		NET 2-SEC RE	CORDS WI	TH SORTS		651			
		2-SEC PERIOD	S WITH N	O SORTS		11,869			
		AVG TIME BET	WEEN 2-S	EC SORTS		38.5 sec			
1-GATE S		448	ACT_ND		SPEC_A	ACT_F		FREQ%	ACT_P
DETECTO	SORTS	FREQX	(Bq)	(#)	(Bq/kg)	(Bq)	(#)		(kBq)
1	7	1.6%	-14000	0	-261	4000	31	3.4%	4
2	27		-12000	1	-224	8000	408		8
3	56		-10000	4	-187	12000		16.6%	12
4	76		-8000	0	-149	16000		9.7%	16
5	79		-6000	10	-112	20000		6.1%	20
6	76	17.0%	-4000	14	-75	24000	30	3.3%	24
7	95	21.2%	-2000	54	-37	28000	23	2.5%	28
8	32	7.1%	0	180	0	32000	18	2.0%	32
TOTAL	448		2000	211	37	36000	13	1.4%	36
			4000	220	75	40000	12	1.3%	40
2-GATE SO	ORTS	474	6000	185	112	44000	8	0.9%	44
DETECTO	SORTS	FREQ%	8000	158	149	48000		1.4%	48
8			10000	86	187	52000		0.8%	52
9	19	4.0%	12000	62	224	56000		0.7%	56
10	47	9.9%	14000	40	261	60000	9	1.0%	60
11	71	15.0%	16000	20	299	64000		0.2%	64
12	79	16.7%	18000	14	336	68000		0.5%	68
13	80	16.9%	20000	1	373	72000		0.3%	72
14	114	24.1%	22000	0	410	76000	2	0.2%	76
15	64	13.5%	24000	0	448	80000	4	0.4%	80
TOTAL	474		26000	0	485	84000	1	0.1%	84
			>28000	0	0	>84000		3.1%	>84
			TOTAL	1260		TOTAL			
HP		913		GATE 1	922				
MP		643	(	GATE2	474				
DI	SE	2391							

REC CODE EXPLANATION



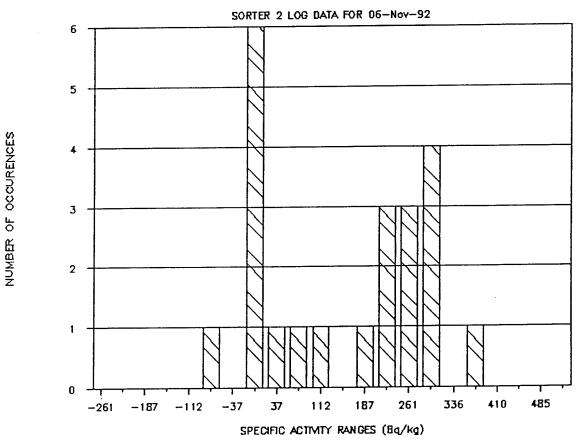


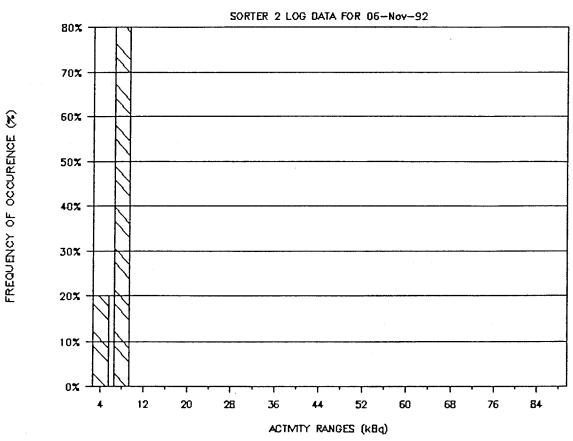
SORTER 2 06-Nov-92			
AVERAGE BACKGROUND COUNT RATE	0.60 ± 0.0	00 c/sec	
SORTER SOIL DENSITY	1.15 tons/m³		
GROUND SOIL DENSITY	1.65 tons/m <sup>3</sup>		
		CONTAMINATED	CLEAN
MASS TOTAL		0.06 tons	0.7 tons
MAXIMUM/SORT		53.6 kg	53.6 kg
MINIMUM/SORT		0.7 kg	51.6 kg
WEIGHT RECOVERY OR VOLUME RECOVER	Υ		92.6%
EQUIVALENT SOIL-IN-GROUND		0.05 yd³	0.6 yd <sup>3</sup> 0.6 yd <sup>3</sup> /day
PARTICLE ACTIVITY (MAXIMUM ESTIMA	TE)		
TOTAL		25 kBq	
MAXIMUM/SORT		7 kBq	
MINIMUM/SORT		3.3 kBq	
DISPERSED + PARTICLE (REALISTIC E	STIMATE) ACTIVITY	42 kBq	145 kBq
MAXIMUM/SORT		22 kBq	18 kBq
MINIMUM/SORT		0 Bq	-0 kBq
SPECIFIC ACTIVITY		697 Bq/kg	194 Bq/kg
WORK DAY			
WORK DAY START	07:00 AM		
PROCESSING START	04:10 PM		
PLANT STARTUP TIME		9.17 hr	
PROCESSING END	04:14 PM		
WORK DAY END	05:30 PM		
PLANT SHUTDOWN TIME		1.26 hr	
LUNCH PERIOD		0.5 hr	
WORK HOURS		10.0 hr	
MAX PROCESS HOURS (END-STAI	RT)	0.08 hr	
ACTUAL PROCESS HOURS (TOTAL		0.08 hr	
TOTAL SYSTEM PAUSE TIME		0.00 hr	
TOTAL DOWNTIME (MAX-ACTUAL)	)	-0.01 hr	
TIME UTILIZATION (ACTUAL H		0.8%	
TOTAL SOIL PROCESSING RECORDS (2-5	SEC and 20-SEC)	20	
NONPROCESS RECORDS (Test, calibrat		7	
•			
20-SEC PROCESS RECORDS		15	
TOTAL SORT		1 MD>0 & MND=0	
NO SORT		9 AD=0 & MD=0 &	
SOME SORT		5 AD>0&0 <md<mnd< td=""><td>max&amp;MND<mndmax< td=""></mndmax<></td></md<mnd<>	max&MND <mndmax< td=""></mndmax<>
UNEXPLAINED RECORD	s	0	
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& 0=DA	MD 0		
& 0>DA	MD 0		

150

2	-SEL LL	MI PERIODS				130				
		2-SEC RECOR	S WITH S	SORTS		5	AP>0			
		2-SEC RECOR	S WITH F	POSITIVES	IN >1 DE	ETECTOR				
		;	2 DETECTO	ORS	2		66.7%			
		3	B DETECTO	RS	1		33.3%			
		4	DETECTO	RS	0		0.0%			
		<u>.</u>	DETECTO	RS	0		0.0%			
			DETECTO	RS	0		0.0%			
		i	DETECTO	RS	0		0.0%			
		8	DETECTO	RS	0		0.0%			
		1	OTAL			3				
		NET 2-SEC RE	CORDS WI	TH SORTS		2				
		2-SEC PERIOD	S WITH N	O SORTS		148				
		AVG TIME BET	WEEN 2-S	EC SORTS		150.0	sec			
1-GATE S	ORTS	3	ACT_ND	NUMBER	SPEC_A		ACT_P	SORT	FREQ%	ACT_P
DETECTO	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(Bq)	(#)		(kBq)
1	0	0.0%	-14000	0	-261		4000	1	20.0%	4
2	1	33.3%	-12000	0	-224		8000	4	80.0%	8
3	0	0.0%	-10000	0	- 187		12000	0	0.0%	12
4	2	66.7%	-8000	0	-149		16000	0	0.0%	16
5	0	0.0%	-6000	0	-112		20000	0	0.0%	20
6	0	0.0%	-4000	1	-75		24000	0	0.0%	24
7	0	0.0%	-2000	0	-37		28000	0	0.0%	28
8	0	0.0%	0	6	0		32000	0	0.0%	32
TOTAL	3		2000	1	37		36000	0	0.0%	36
			4000	1	75		40000	0	0.0%	40
2-GATE SC	ORTS	2	6000	1	112		44000	0	0.0%	44
DETECTO	SORTS	FREQ%	8000	0	149		48000	0	0.0%	48
8			10000	1	187		52000	0	0.0%	52
9	0	0.0%	12000	3	224		56000	0	0.0%	56
10	0	0.0%	14000	3	261		60000	0	0.0%	60
11	1	50.0%	16000	4	299		64000	0	0.0%	64
12	1	50.0%	18000	0	336		68000	0	0.0%	68
13	0	0.0%	20000	1	373		72000	0	0.0%	72
14	0	0.0%	22000	0	410		76000	0	0.0%	76
15	0	0.0%	24000	0	448		80000	0	0.0%	80
TOTAL	2		26000	0	485		84000	0	0.0%	84
			>28000	0	0		>84000	0	0.0%	>84
			TOTAL	22			TOTAL	5		
HP	Ε	5	G	ATE1	5					
MP	Ε	- 5	G	ATE2	2					
DI	SE	79								

REC CODE EXPLANATION





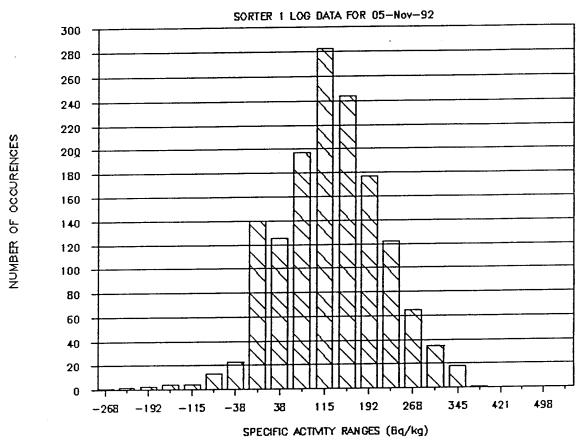
•					
SORTER 1 05-Nov-9	22	-			
AVERAGE BACKGROUND COUNT	DATE	0.79 ± 0.	.04 c/sec		
	WALE .	1.15 tons/m <sup>3</sup>	•		
SORTER SOIL DENSITY		1.65 tons/m <sup>3</sup>			
GROUND SOIL DENSITY		1205 (0137111	CONTAMINATED	CLEAN	
MASS TOTAL			5.38 tons	71.8	tons
MAXIMUM/SORT			53.6 kg	53.6	kg
MINIMUM/SORT			0.7 kg	44.9	
MINIMONY SOLL					
WEIGHT RECOVERY OR VOLUME	RECOVERY				93.0%
EQUIVALENT SOIL-IN-GROUND	1		4.27 yd3	56.9	yd³ 61.2 yd³/day
PARTICLE ACTIVITY (MAXIMU	M ESTIMATE)				
TOTAL			22,269 kBq		
MAXIMUM/SORT		•	415 kBq		
MINIMUM/SORT			2.6 kBq		
MINITION, SORT			•		
DISPERSED + PARTICLE (REA	LISTIC ESTIMATE) ACTIV	/ITY	10,574 kBq	8,226	kBq
MAXIMUM/SORT			266 kBq	18	kBq
MINIMUM/SORT			0 Bq	-10	kBq
SPECIFIC ACTIVITY			1,964 Bq/kg	115	Bq/kg
WORK DAY	07.00.44				
WORK DAY START	07:00 AM				
PROCESSING START	07:43 AM		0	72 hr	
PLANT STARTUP TIME			0.	, <u>, , , , , , , , , , , , , , , , , , </u>	
PROCESSING END	04:56 PM				
WORK DAY END	05:30 PM		n	56 hr	
PLANT SHUTDOWN TIM	t		0.	30 III	
LUNCH PERIOD			0	.5 hr	
WORK HOURS			10	.0 hr	
MAX PROCESS HOURS	(END-START)		9.	23 hr	
ACTUAL PROCESS HOU	RS (TOTAL 20-SEC SORT	PERIODS)	8.	01 hr.	
TOTAL SYSTEM PAUSE	TIME			00 hr	
TOTAL DOWNTIME (MA	X-ACTUAL)		1.	22 hr	
TIME UTILIZATION (	ACTUAL HRS/WORK HRS)		80	.0%	
TOTAL SOIL PROCESSING REC	ORDS (2-SEC and 20-SEC	:)	2,803		
NONPROCESS RECORDS (Test,		•	16		
HOM ROCESS RESORDS (1951)					
20-SEC PROCESS REC	ORDS		1,441		
TOTAL SOR	T		78 MD>0		
NO SORT				0 <dre>d</dre>	
SOME SORT			712 AD>0&	NM>DNM&xemDNM>DM>D	IDmax
UNEXPLAIN	ED RECORDS		1		
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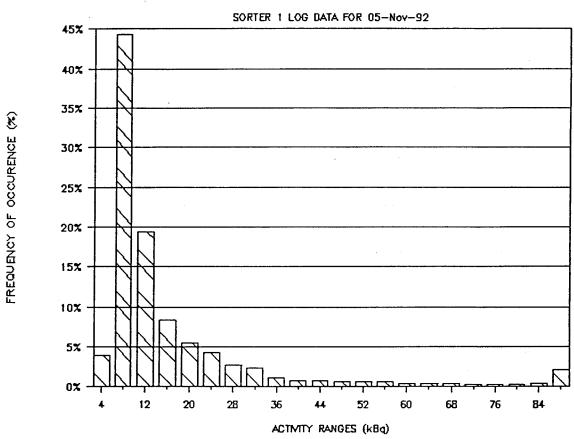
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14,410

		2-SEC RECORD	S WITH S	ORTS		1,362 AP>0				
		2-SEC RECORDS WITH POSITIVES			IN >1 DE	TECTOR				
		2	DETECTO	RS	322	80.5%				
		3	DETECTO	RS	61	15.3%				
		4	DETECTO	RS	15	3.8%				
		5	DETECTO	RS	2	0.5%				
		6	DETECTO	RS	0	0.0%				
		7	DETECTO	RS	0	0.0%				
		8	DETECTO	RS	0	0.0%				
		T	OTAL			400				
		NET 2-SEC RE				962				
		2-SEC PERIOD				13,448				
		AVG TIME BET	WEEN 2-5	EC SURTS		30.0 sec				
1-GATE SO	ORTS	690	ACT_ND	NUMBER	SPEC_A	,	ACT_P	SORT	FREQ%	ACT_P
DETECTO	SORTS	FREQ%	(Bq)		(Bq/kg)		(Bq)	(#)		(kBq)
										•
1	29	4.2%	-14000	1	-261		4000	53	3.9%	4
2	87	12.6%	-12000	2	-224		8000	604	44.3%	8
3	115	16.7%	-10000	3	-187		12000	265	19.5%	12
4	111	16.1%	-8000	4	-149		16000	114	8.4%	16
5	123	17.8%	-6000	4	-112		20000	75	5.5%	20
6	112	16.2%	-4000	13	-75		24000	58	4.3%	24
7	90	13.0%	-2000	23	-37		28000	37	2.7%	28
8	23	3.3%	0	140	0		32000	32	2.3%	32
TOTAL	690		2000	125	37		36000	15	1.1%	36
			4000	197	. 75		0000	11	0.8%	40
2-GATE SC		672	6000	283	112		4000	11	0.8%	44
DETECTO	SORTS	FREQX	8000	244	149		8000	9	0.7%	48
8			10000	177	187		2000	8	0.6%	52
9	55	8.2%	12000	122	224		0000	9	0.7% 0.4%	56 60
10	90	13.4%	14000	65 75	261 299		30000 34000	6	0.4%	64
11	123	18.3%	16000	35 18	336		8000	6	0.4%	68
12 13	122 108	18.2% 16.1%	18000 20000	10	373		2000	4	0.3%	72
14	123	18.3%	22000	0	410		6000	3	0.2%	76
15	51	7.6%	24000	0	448		30000	3	0.2%	80
TOTAL	672	7.0%	26000	0	485		4000	5	0.4%	84
IOIAL	012		>28000	0	0		4000	28	2.1%	>84
			TOTAL	1457	J		OTAL	1362	2.17	-04
			TOTAL	1431		'	JIML			
не	Έ	1336	(	SATE1	1362					
MP		1187		GATE2	672					
DI	SE	5595								

REC CODE EXPLANATION





SORTER 2 05-Nov-92	-								
AVERAGE BACKGROUND COUNT RATE	0.	.80	±	0.06	c/sec				
SORTER SOIL DENSITY			ons/m	3					
GROUND SOIL DENSITY	1.	.65 t	ons/m	3					
GROOMS SOIL DEMOTIO					CONTAM	INATED	CLEAN	1	
MASS TOTAL					4.35	tons	56.7	7 tons	
MAXIMUM/SORT					53.6	kg	53.6	s kg	
MINIMUM/SORT					0.7	kg	42.2	2 kg	
WEIGHT RECOVERY OR VOLUME REC	OVERY								92.9%
EQUIVALENT SOIL-IN-GROUND					3.45	yd³	45.0	) Aq <sub>3</sub>	48.4 yd3/day
PARTICLE ACTIVITY (MAXIMUM ES	TIMATE)								
TOTAL					15,957	-			
MAXIMUM/SORT						kBq			
MINIMUM/SORT					2.3	kBq			
DISPERSED + PARTICLE (REALIST	IC ESTIMATE) ACTIVITY	,			9,650	kBq	9,461	l kBq	
MAXIMUM/SORT	io correct, novivi				•	kBq		) kBq	
MINIMUM/SORT					0	Bq	-6	kBq	
SPECIFIC ACTIVITY					2,216	Bq/kg	167	Bq/kg	
WORK DAY									
WORK DAY START	07:00 AM								
PROCESSING START	07:43 AM								
PLANT STARTUP TIME						0.72 h	r		
PROCESSING END	04:57 PM								
WORK DAY END	05:30 PM								
PLANT SHUTDOWN TIME						0.55 h	r		
LUNCH PERIOD						0.5 h	r		
WORK HOURS						10.0 h	٢		
MAX PROCESS HOURS (END	-START)					9.24 h	Γ		
ACTUAL PROCESS HOURS (	TOTAL 20-SEC SORT PER	1005	;)			6.33 h	Г		
TOTAL SYSTEM PAUSE TIM	Ē					0.00 h	Г		
TOTAL DOWNTIME (MAX-AC	TUAL)					2.90 h	r		
TIME UTILIZATION (ACTU	AL HRS/WORK HRS)					63.3%			
TOTAL SOIL PROCESSING RECORDS	(2-SEC and 20-SEC)				1,996				
NONPROCESS RECORDS (Test, cal	ibration, etc)				18				
20-SEC PROCESS RECORDS					1,140				
TOTAL SORT					60	MD>0 & MNE	)=0		
NO SORT						AD=0 & MD=			
SOME SORT					652	AD>0&0 <md< td=""><td>M&gt;DMM&amp;xemDMM&gt;</td><td>NDmax</td><td></td></md<>	M>DMM&xemDMM>	NDmax	
UNEXPLAINED R	ECORDS				0		٠		
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40.	-0 9 ND 0								

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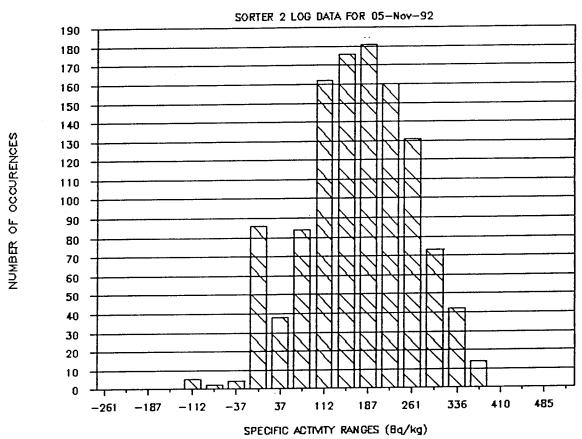
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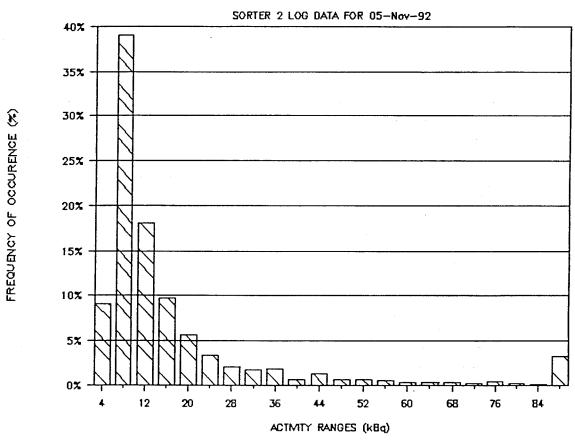
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11,400

2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR   2 DETECTORS   2 DETECTORS   45   17.0x   4 DETECTORS   12   4.5x   5 DETECTORS   2   0.8x   6 DETECTORS   0   0.0x   7 DETECTORS   0   0.0x   8 DETECTORS   0   0.0x   1 TOTAL   265    NET 2-SEC RECORDS WITH NOT SORTS   2-SEC PERIODS WITH NOT SORTS   38.6 sec  1-GATE SORTS   457   ACT_ND   NUMBER   SPEC_A   ACT_P   SORT   FRE0X   ACT_P   DETECTO   SORTS   FRE0X   (Bq)   (#) (Bq/kg)   (Bq)   (#) (kBq)    1   21   4.6x   -14000   0   -261   4000   78   9.1%   42   2   70   15.3x   -12000   0   -224   8000   335   39.1%   8   3   98   21.4x   -10000   0   -187   12000   155   18.1%   12   4   91   19.9x   -8000   0   -119   16000   48   5.6x   20   6   66   61.4x   -4000   2   -75   24000   28   3.4x   20   6   66   66   14.4x   -4000   2   -75   24000   29   3.4x   20   6   66   64   14.4x   -4000   2   -75   24000   18   2.1%   28   8   6   1.3x   0   86   0   32000   15   1.8x   32   101AL   457   2000   38   37   36000   16   1.9x   36   10   457   40   8.8x   -2000   38   37   36000   16   1.9x   36   10   69   17.3x   14000   160   224   56000   5   0.6x   56   10   69   17.3x   14000   181   187   52000   6   0.7x   40   2-GATE SORTS   5800   76   149   48000   6   0.7x   40   2-GATE SORTS   5800   76   149   48000   6   0.7x   40   2-GATE SORTS   5800   76   149   48000   3   0.4x   68   8   8   10000   161   112   44000   11   1.3x   44   DETECTO   50RTS   FRE0X   8000   176   149   48000   6   0.7x   40   2-GATE SORTS   5800   76   149   48000   3   0.4x   68   8   8   10000   161   187   52000   5   0.6x   56   10   69   17.3x   14000   131   187   52000   5   0.6x   56   10   69   17.3x   14000   131   261   60000   3   0.4x   68   11   94   23.5x   16000   73   299   64000   3   0.4x   68   13   63   15.8x   20000   140   373   72000   2   0.2x   72   14   52   13.0x   22000   0   448   80000   2   0.2x   72   15   7   1.8x   24000			2-SEC RECORD	S WITH S	ORTS		856 AP>0				
A DETECTORS			2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	ETECTOR				
Company			ā	DETECTO	RS	206	77.7%				
S DETECTORS   Q 0.0%			3	DETECTO	RS	45	17.0%				
NET 2-SEC PECTORS WITH NO SORTS   SPI   2-SEC PECTORS WITH NO SORTS   TOTAL   265			4	DETECTO	RS	12	4.5%				
NET 2-SEC RECORDS WITH NO SORTS   10,809   10,000   10			5	DETECTO	RS	2	0.8%				
NET 2-SEC RECORDS WITH SORTS   10,809   28.5   2			ć	DETECTO	RS	0	0.0%				
NET 2-SEC RECORDS WITH NO SORTS   10,809			7	DETECTO	RS	0	0.0%				
NET 2-SEC PERIODS WITH NOTES 2-SEC PERIODS WITH NOTES 2-SEC PERIODS SORTS  AVG TIME BETWEEN 2-SEC SORTS  10,809  38.6 sec  1-GATE SORTS  457 ACT_ND NUMBER SPEC_A  (Rq) (#) (#) (Rq/kg)  1 21 4.6% -14000 0 -261 4000 78 9.1% 4 2 70 15.3% -12000 0 -224 8000 335 39.1% 8 3 98 21.4% -10000 0 -187 12000 155 18.1% 12 4 91 19.9% -8000 0 -149 16000 83 9.7% 16 5 65 14.2% -6000 5 -112 20000 48 5.6% 20 6 66 61 14.4% -4000 2 -75 24000 29 3.4% 24 7 40 8.8% -2000 4 -37 28000 18 2.1% 28 8 6 1.3% 0 86 0 32000 15 1.8% 32 10TAL 457 2000 38 37 36000 16 1.9% 36 10TAL 457 2000 38 37 36000 16 1.9% 36 2-GATE SORTS FREQX 8000 162 1112 44000 11 1.3% 44 DETECTO SORTS FREQX 8000 176 112 44000 11 1.3% 44 DETECTO SORTS FREQX 8000 176 112 44000 11 1.3% 44 DETECTO SORTS FREQX 8000 176 112 44000 11 1.3% 44 DETECTO SORTS FREQX 8000 176 112 44000 11 1.3% 44 DETECTO SORTS FREQX 8000 176 112 44000 11 1.3% 44 DETECTO SORTS FREQX 8000 176 112 44000 11 1.3% 44 DETECTO SORTS FREQX 8000 176 112 44000 11 1.3% 46 DETECTO SORTS FREQX 8000 176 112 44000 11 1.3% 46 DETECTO SORTS FREQX 8000 176 112 44000 11 1.3% 46 DETECTO SORTS FREQX 8000 176 112 44000 11 1.3% 46 DETECTO SORTS FREQX 8000 176 112 44000 11 1.3% 46 DETECTO SORTS FREQX 8000 176 112 44000 11 1.3% 46 DETECTO SORTS FREQX 8000 176 112 44000 11 1.3% 46 DETECTO SORTS FREQX 8000 176 112 44000 6 0.7% 48 B 10000 181 187 52000 6 0.7% 52 9 36 9.0% 12000 160 224 56000 5 0.6% 56 10 69 17.3% 14000 131 261 60000 3 0.4% 60 11 94 23.5% 16000 73 299 64000 3 0.4% 64 12 79 19.8% 18000 42 336 68000 3 0.4% 68 13 63 15.8% 20000 14 373 72000 2 0.2% 72 14 52 13.0% 22000 0 410 76000 4 0.5% 76 15 7 1.8% 24000 0 448 80000 2 0.2% 80 TOTAL 400 885 84000 1 0.1% 867			8	DETECTO	RS	0	0.0%				
1-GATE   SORTS   10,809   38.6 sec   10,809			1	OTAL			265				
1-GATE   SORTS   10,809   38.6 sec   10,809											
1-GATE   SORTS   1457   ACT   NO   NUMBER   SPEC   A   ACT   SORT   FREQX   ACT   P   CKBQ   CKBQ			NET 2-SEC RE	CORDS WI	TH SORTS		591				
1-GATE SORTS SORTS FREOX (Bq) (#) (Bq/kg) (Bq) (#) (Req) (Req)  1 21 4.6x -14000 0 -261 4000 78 9.1x 4 2 70 15.3x -12000 0 -224 8000 335 39.1x 8 3 98 21.4x -10000 0 -187 12000 155 18.1x 12 4 91 19.9x -8000 0 -149 16000 83 9.7x 16 5 65 14.2x -6000 5 -112 20000 48 5.6x 20 6 66 14.4x -4000 2 -75 24000 29 3.4x 24 7 40 8.8x -2000 4 -37 28000 18 2.1x 28 8 6 1.3x 0 86 0 32000 15 1.8x 32  TOTAL 457 2000 38 37 36000 16 1.9x 36  8 6 1.3x 0 86 0 32000 15 1.8x 32  TOTAL 457 2000 38 37 36000 16 1.9x 36  BETECTO SORTS FREQX 8000 176 149 48000 6 0.7x 44  BETECTO SORTS FREQX 8000 176 149 48000 6 0.7x 44  BETECTO SORTS FREQX 8000 176 149 48000 6 0.7x 52 9 36 9.0x 12000 181 187 52000 6 0.7x 52 9 36 9.0x 12000 160 224 56000 5 0.6x 56 10 69 17.3x 14000 131 261 60000 3 0.4x 60 11 94 23.5x 16000 73 299 64000 3 0.4x 60 11 94 23.5x 16000 73 299 64000 3 0.4x 64 12 79 19.8x 18000 42 336 68000 3 0.4x 64 12 79 19.8x 18000 42 336 68000 3 0.4x 64 11 94 23.5x 16000 73 299 64000 3 0.4x 68 13 63 15.8x 20000 14 373 72000 2 0.2x 72 14 52 13.0x 22000 0 448 80000 2 0.2x 72 14 52 13.0x 22000 0 448 80000 2 0.2x 80  TOTAL 400 400 845 84000 1 0.1x 84  PHE 821 GATE1 856  MPE 830 GATE2 399			2-SEC PERIOD	S WITH N	O SORTS		10,809				
DETECTO         SORTS         FREQX         (Bq)         (#) (Bq/kg)         (Bq)         (#)         (kBq)           1         21         4.6% -14000         0         -261         4000         78         9.1%         4           2         70         15.3% -12000         0         -224         8000         335         39.1%         8           3         98         21.4% -10000         0         -187         12000         155         18.1%         12           4         91         19.9% -8000         0         -149         16000         83         9.7%         16           5         65         14.2% -6000         5         -112         20000         48         5.6%         20           6         66         14.4% -4000         2         -75         24000         29         3.4%         24           7         40         8.8% -2000         4         -37         28000         18         2.1%         28           8         6         1.3%         0         86         0         32000         15         1.8%         32           107AL         457         2000         38         37         <			AVG TIME BET	WEEN 2-S	EC SORTS		38.6 sec				•
DETECTO         SORTS         FREQX         (Bq)         (#) (Bq/kg)         (Bq)         (#)         (kBq)           1         21         4.6% -14000         0         -261         4000         78         9.1%         4           2         70         15.3% -12000         0         -224         8000         335         39.1%         8           3         98         21.4% -10000         0         -187         12000         155         18.1%         12           4         91         19.9% -8000         0         -149         16000         83         9.7%         16           5         65         14.2% -6000         5         -112         20000         48         5.6%         20           6         66         14.4% -4000         2         -75         24000         29         3.4%         24           7         40         8.8% -2000         4         -37         28000         18         2.1%         28           8         6         1.3%         0         86         0         32000         15         1.8%         32           101A         457         2000         38         37 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>											
1 21 4.6% -14000 0 -261 4000 78 9.1% 4 2 70 15.3% -12000 0 -224 8000 335 39.1% 8 3 98 21.4% -10000 0 -187 12000 155 18.1% 12 4 91 19.9% -8000 0 -149 16000 83 9.7% 16 5 65 14.2% -6000 5 -112 20000 48 5.6% 20 6 66 14.4% -4000 2 -75 24000 29 3.4% 24 7 40 8.8% -2000 4 -37 28000 18 2.1% 28 8 6 13.3% 0 86 0 32000 15 1.8% 32  TOTAL 457 2000 38 37 36000 16 1.9% 36 2-GATE SORTS 399 6000 162 112 44000 11 1.3% 44  DETECTO SORTS FREQ% 8000 176 149 48000 6 0.7% 40 2-GATE SORTS FREQ% 8000 176 149 48000 6 0.7% 48  8 10000 181 187 52000 6 0.7% 48  B 10000 181 187 52000 6 0.7% 52 9 36 9.0% 12000 1600 224 56000 5 0.6% 56 10 69 17.3% 14000 131 261 60000 3 0.4% 64 11 94 23.5% 16000 73 299 64000 3 0.4% 64 12 79 19.8% 18000 42 336 68000 3 0.4% 68 13 63 15.8% 20000 14 373 72000 2 0.2% 72 14 52 13.0% 22000 0 410 76000 4 0.5% 76 15 7 1.8% 24000 0 448 80000 2 0.2% 72 14 52 13.0% 22000 0 410 76000 4 0.5% 76 15 7 1.8% 24000 0 448 80000 2 0.2% 72 14 52 13.0% 22000 0 410 76000 4 0.5% 76 15 7 1.8% 24000 0 448 80000 2 0.2% 80  TOTAL 400	1-GATE SC	ORTS	457	ACT_ND	NUMBER	SPEC_A		ACT_P		FREQ%	ACT_P
2 70 15.3% -12000 0 -224 8000 335 39.1% 8 3 98 21.4% -10000 0 -187 12000 155 18.1% 12 4 91 19.9% -8000 0 -149 16000 83 9.7% 16 5 65 14.2% -6000 5 -112 20000 48 5.6% 20 6 66 14.4% -4000 2 -75 24000 29 3.4% 24 7 40 8.8% -2000 4 -37 28000 18 2.1% 28 8 6 11.3% 0 86 0 32000 15 1.8% 32  TOTAL 457 2000 84 75 40000 6 0.7% 40 2-GATE SORTS 399 6000 162 112 44000 11 1.3% 44  DETECTO SORTS FREQ% 8000 176 149 48000 6 0.7% 40  2 9 36 9.0% 12000 160 224 56000 5 0.6% 56 10 69 17.3% 14000 131 261 60000 3 0.4% 60 11 94 23.5% 16000 73 299 64000 3 0.4% 64 12 79 19.8% 18000 42 336 68000 3 0.4% 64 12 79 19.8% 18000 42 336 68000 3 0.4% 64 13 63 15.8% 20000 14 373 72000 2 0.2% 72 14 52 13.0% 22000 0 410 76000 4 0.5% 76 15 7 1.8% 24000 0 448 80000 2 0.2% 72 14 52 13.0% 22000 0 410 76000 4 0.5% 76 15 7 1.8% 24000 0 448 80000 2 0.2% 72 14 52 13.0% 22000 0 410 76000 4 0.5% 76 15 7 1.8% 24000 0 448 80000 2 0.2% 72 10 400 26000 0 485 84000 1 0.1% 84  PHPE 821 GATE1 856  HPE 821 GATE1 856  HPE 821 GATE1 856  HPE 1301 GATE2 399	DETECTO	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(Bq)	(#)		(kBq)
2 70 15.3% -12000 0 -224 8000 335 39.1% 8 3 98 21.4% -10000 0 -187 12000 155 18.1% 12 4 91 19.9% -8000 0 -149 16000 83 9.7% 16 5 65 14.2% -6000 5 -112 20000 48 5.6% 20 6 66 14.4% -4000 2 -75 24000 29 3.4% 24 7 40 8.8% -2000 4 -37 28000 18 2.1% 28 8 6 11.3% 0 86 0 32000 15 1.8% 32  TOTAL 457 2000 84 75 40000 6 0.7% 40 2-GATE SORTS 399 6000 162 112 44000 11 1.3% 44  DETECTO SORTS FREQ% 8000 176 149 48000 6 0.7% 40 2-GATE SORTS 8000 180 176 149 48000 6 0.7% 52 9 36 9.0% 12000 160 224 56000 5 0.6% 56 10 69 17.3% 14000 131 261 60000 3 0.4% 60 11 94 23.5% 16000 73 299 64000 3 0.4% 60 11 94 23.5% 16000 73 299 64000 3 0.4% 64 12 79 19.8% 18000 42 336 68000 3 0.4% 64 12 79 19.8% 18000 42 336 68000 3 0.4% 64 12 79 19.8% 18000 42 336 68000 3 0.4% 64 13 63 15.8% 20000 14 373 72000 2 0.2% 72 14 52 13.0% 22000 0 410 76000 4 0.5% 76 15 7 1.8% 24000 0 448 80000 2 0.2% 72 14 52 13.0% 22000 0 448 80000 2 0.2% 72 14 52 13.0% 22000 0 448 80000 2 0.2% 76 15 7 1.8% 24000 0 448 80000 2 0.2% 76 15 7 1.8% 24000 0 448 80000 2 0.2% 76 15 7 1.8% 24000 0 448 80000 2 0.2% 76 15 7 1.8% 24000 0 448 80000 2 0.2% 76 15 7 1.8% 24000 0 448 80000 2 0.2% 80  TOTAL 400 881 821 GATE1 856 MPE 821 GATE1 856 MPE 1301 GATE2 399											
3 98 21.4% -10000 0 -187 12000 155 18.1% 12 4 91 19.9% -8000 0 -149 16000 83 9.7% 16 5 65 14.2% -6000 5 -112 20000 48 5.6% 20 6 66 61 14.4% -4000 2 -75 24000 29 3.4% 24 7 40 8.8% -2000 4 -37 28000 18 2.1% 28 8 6 11.3% 0 86 0 32000 15 1.8% 32  TOTAL 457 2000 38 37 36000 16 1.9% 36 2-GATE SORTS 399 6000 162 112 44000 11 1.3% 44  DETECTO SORTS FREQ% 8000 176 149 48000 6 0.7% 48  8 10000 181 187 52000 6 0.7% 52 9 36 9.0% 12000 160 224 56000 5 0.6% 56 10 69 17.3% 14000 131 261 60000 3 0.4% 60 11 94 23.5% 16000 73 299 64000 3 0.4% 60 11 94 23.5% 16000 73 299 64000 3 0.4% 64 12 79 19.8% 18000 42 336 68000 3 0.4% 64 12 79 19.8% 18000 42 336 68000 3 0.4% 68 13 63 15.8% 20000 14 373 72000 2 0.2% 72 14 52 13.0% 22000 0 410 76000 4 0.5% 76 15 7 1.8% 24000 0 448 80000 2 0.2% 72 14 52 13.0% 22000 0 410 76000 4 0.5% 76 15 7 1.8% 24000 0 448 80000 2 0.2% 76 15 7 1.8% 24000 0 448 80000 2 0.2% 76 15 7 1.8% 24000 0 448 80000 2 0.2% 76 15 7 1.8% 24000 0 448 80000 2 0.2% 76 15 7 1.8% 24000 0 448 80000 2 0.2% 76 15 7 1.8% 24000 0 448 80000 2 0.2% 76 15 7 1.8% 24000 0 448 80000 2 0.2% 76 15 7 1.8% 24000 0 448 80000 2 0.2% 80  TOTAL 400 26000 0 485 84000 1 0.1% 84  ▶28000 0 0 0 ▶84000 28 3.3% ▶84  ■HPE 821 GATE1 856  ■HPE 821 GATE1 856  ■HPE 821 GATE2 399											
4       91       19.9%       -8000       0       -149       16000       83       9.7%       16         5       65       14.2%       -6000       5       -112       20000       48       5.6%       20         6       66       14.4%       -4000       2       -75       24000       29       3.4%       24         7       40       8.8%       -2000       4       -37       28000       18       2.1%       28         8       6       11.3%       0       86       0       32000       15       1.8%       32         TOTAL       457       2000       38       37       36000       16       1.9%       36         2-GATE SORTS       399       6000       162       112       44000       11       1.3%       44         DETECTO       SORTS       FREQX       8000       176       149       48000       6       0.7%       48         8       10000       181       187       52000       6       0.7%       52         9       36       9.0%       12000       160       224       56000       5       0.6%       56											
5       65       14.2x       -6000       5       -112       20000       48       5.6x       20         6       66       14.4x       -4000       2       -75       24000       29       3.4x       24         7       40       8.8x       -2000       4       -37       28000       18       2.1x       28         8       6       11.3x       0       86       0       32000       15       1.8x       32         TOTAL       457       2000       38       37       36000       16       1.9x       36         2-GATE SORTS       399       6000       162       112       44000       11       1.3x       44         DETECTO       SORTS       FREOX       8000       176       149       48000       6       0.7x       48         8       10000       181       187       52000       6       0.7x       52         9       36       9.0x       12000       160       224       56000       5       0.6x       56         10       69       17.3x       14000       131       261       60000       3       0.4x       64											
6 66 14.4% -4000 2 -75 24000 29 3.4% 24 7 40 8.8% -2000 4 -37 28000 18 2.1% 28 8 6 1.3% 0 86 0 32000 15 1.8% 32  TOTAL 457 2000 38 37 36000 16 1.9% 36 4000 84 75 40000 6 0.7% 40  2-GATE SORTS 399 6000 162 112 44000 11 1.3% 44  DETECTO SORTS FREQ% 8000 176 149 48000 6 0.7% 48  8 10000 181 187 52000 6 0.7% 52 9 36 9.0% 12000 160 224 56000 5 0.6% 56 10 69 17.3% 14000 131 261 60000 3 0.4% 60 11 94 23.5% 16000 73 299 64000 3 0.4% 60 11 94 23.5% 16000 73 299 64000 3 0.4% 64 12 79 19.8% 18000 42 336 68000 3 0.4% 64 12 79 19.8% 18000 42 336 68000 3 0.4% 68 13 63 15.8% 20000 14 373 72000 2 0.2% 72 14 52 13.0% 22000 0 410 76000 4 0.5% 76 15 7 1.8% 24000 0 448 80000 2 0.2% 80  TOTAL 400 26000 0 485 84000 1 0.1% 84  >28000 0 0 0 884000 28 3.3% >84  TOTAL 1158 TOTAL 857											
7       40       8.8%       -2000       4       -37       28000       18       2.1%       28         8       6       1.3%       0       86       0       32000       15       1.8%       32         TOTAL       457       2000       38       37       36000       16       1.9%       36         2-GATE SORTS       399       6000       162       112       44000       11       1.3%       44         DETECTO       SORTS       FREQX       8000       176       149       48000       6       0.7%       48         8       10000       181       187       52000       6       0.7%       52         9       36       9.0%       12000       160       224       56000       5       0.6%       56         10       69       17.3%       14000       131       261       6000       3       0.4%       60         11       94       23.5%       16000       73       299       64000       3       0.4%       68         13       63       15.8%       20000       14       373       72000       2       0.2%       72											
8       6       1.3%       0       86       0       32000       15       1.8%       32         TOTAL       457       2000       38       37       36000       16       1.9%       36         2-GATE SORTS       399       6000       162       112       44000       11       1.3%       44         DETECTO       SORTS       FREQ%       8000       176       149       48000       6       0.7%       48         8       10000       181       187       52000       6       0.7%       52         9       36       9.0%       12000       160       224       56000       5       0.6%       56         10       69       17.3%       14000       131       261       60000       3       0.4%       60         11       94       23.5%       16000       73       299       64000       3       0.4%       64         12       79       19.8%       18000       42       336       68000       3       0.4%       68         13       63       15.8%       20000       0       410       76000       4       0.5%       76											
TOTAL       457       2000       38       37       36000       16       1.9%       36         2-GATE SORTS       399       6000       162       112       44000       11       1.3%       44         DETECTO       SORTS       FREQ%       8000       176       149       48000       6       0.7%       48         8       10000       181       187       52000       6       0.7%       52         9       36       9.0%       12000       160       224       56000       5       0.6%       56         10       69       17.3%       14000       131       261       60000       3       0.4%       60         11       94       23.5%       16000       73       299       64000       3       0.4%       64         12       79       19.8%       18000       42       336       68000       3       0.4%       68         13       63       15.8%       20000       14       373       72000       2       0.2%       72         14       52       13.0%       22000       0       448       80000       2											
2-GATE SORTS 399 6000 162 112 44000 11 1.3% 44  DETECTO SORTS FREQ% 8000 176 149 48000 6 0.7% 48  8 10000 181 187 52000 6 0.7% 52  9 36 9.0% 12000 160 224 56000 5 0.6% 56  10 69 17.3% 14000 131 261 60000 3 0.4% 60  11 94 23.5% 16000 73 299 64000 3 0.4% 64  12 79 19.8% 18000 42 336 68000 3 0.4% 68  13 63 15.8% 20000 14 373 72000 2 0.2% 72  14 52 13.0% 22000 0 410 76000 4 0.5% 76  15 7 1.8% 24000 0 485 84000 1 0.1% 84  TOTAL 400 26000 0 0 485 84000 28 3.3% >84  TOTAL 1158 TOTAL 857  HPE 821 GATE1 856  MPE 1301 GATE2 399			1.3%								
2-GATE SORTS       399       6000       162       112       44000       11       1.3%       44         DETECTO       SORTS       FREQ%       8000       176       149       48000       6       0.7%       48         8       10000       181       187       52000       6       0.7%       52         9       36       9.0%       12000       160       224       56000       5       0.6%       56         10       69       17.3%       14000       131       261       60000       3       0.4%       60         11       94       23.5%       16000       73       299       64000       3       0.4%       64         12       79       19.8%       18000       42       336       68000       3       0.4%       68         13       63       15.8%       20000       14       373       72000       2       0.2%       72         14       52       13.0%       22000       0       410       76000       4       0.5%       76         15       7       1.8%       24000       0       485       84000       1       0.1%	TOTAL	457									
DETECTO         SORTS         FREQX         8000         176         149         48000         6         0.7%         48           8         10000         181         187         52000         6         0.7%         52           9         36         9.0%         12000         160         224         56000         5         0.6%         56           10         69         17.3%         14000         131         261         60000         3         0.4%         60           11         94         23.5%         16000         73         299         64000         3         0.4%         64           12         79         19.8%         18000         42         336         68000         3         0.4%         68           13         63         15.8%         20000         14         373         72000         2         0.2%         72           14         52         13.0%         22000         0         410         76000         4         0.5%         76           15         7         1.8%         24000         0         485         84000         1         0.1%         84											
8       10000       181       187       52000       6       0.7%       52         9       36       9.0%       12000       160       224       56000       5       0.6%       56         10       69       17.3%       14000       131       261       60000       3       0.4%       60         11       94       23.5%       16000       73       299       64000       3       0.4%       64         12       79       19.8%       18000       42       336       68000       3       0.4%       68         13       63       15.8%       20000       14       373       72000       2       0.2%       72         14       52       13.0%       22000       0       410       76000       4       0.5%       76         15       7       1.8%       24000       0       448       80000       2       0.2%       80         TOTAL       400       26000       0       485       84000       1       0.1%       84         >28000       0       0       >84000       28       3.3%       >84         TOTAL <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>											
9 36 9.0% 12000 160 224 56000 5 0.6% 56 10 69 17.3% 14000 131 261 60000 3 0.4% 60 11 94 23.5% 16000 73 299 64000 3 0.4% 64 12 79 19.8% 18000 42 336 68000 3 0.4% 68 13 63 15.8% 20000 14 373 72000 2 0.2% 72 14 52 13.0% 22000 0 410 76000 4 0.5% 76 15 7 1.8% 24000 0 448 80000 2 0.2% 80 TOTAL 400 26000 0 485 84000 1 0.1% 84  >28000 0 0 0 84000 28 3.3% >84  TOTAL 1158 TOTAL 857		SORTS	FREQ%								
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>28000 0 0 >84000 28 3.3% >84 TOTAL 1158 TOTAL 857 HPE 821 GATE1 856 MPE 1301 GATE2 399			1.8%								
TOTAL 1158 TOTAL 857  HPE 821 GATE1 856  MPE 1301 GATE2 399	TOTAL	400			0				1		
HPE 821 GATE1 856 MPE 1301 GATE2 399					0	0				3.3%	>84
MPE 1301 GATE2 399				TOTAL	1158		Т	OTAL	857		
MPE 1301 GATE2 399	•	_		=							
UISE 45//				G	ATE2	399					
	DI	<b>S</b> E	45//								

REC CODE EXPLANATION



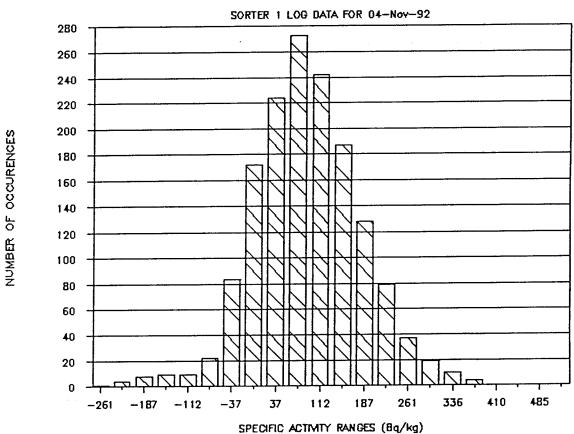


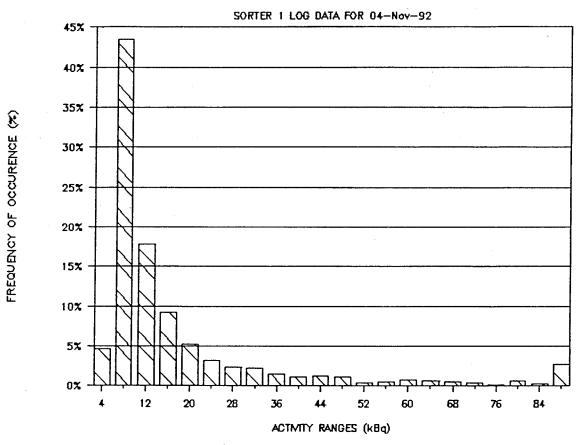
SORTER 1 04-Nov-92	-		
AVERAGE BACKGROUND COUNT RATE	0.80 ±	0.01 c/sec	
SORTER SOIL DENSITY	1.15 tons/m	π <sup>3</sup> ,	
GROUND SOIL DENSITY	1.65 tons/m	n <sup>3</sup>	
and the contract of the contra		CONTAMINATED	CLEAN
MASS TOTAL		1.82 tons	77.6 tons
MAXIMUM/SORT		53.6 kg	53.6 kg
MINIMUM/SORT		0.7 kg	45.5 kg
WEIGHT RECOVERY OR VOLUME RECOVE	RY		97.7%
EQUIVALENT SOIL-IN-GROUND		1.44 yd³	61.6 yd³ 63.0 yd³/day
PARTICLE ACTIVITY (MAXIMUM ESTIM	ATE)		
TOTAL		24,773 kBq	•
MAXIMUM/SORT		2,421 kBq	
MINIMUM/SORT		3.0 kBq	
DISPERSED + PARTICLE (REALISTIC	ESTIMATE) ACTIVITY	8,773 kBq	6,004 kBq
MAXIMUM/SORT		1440 kBq	19 kBq
MINIMUM/SORT		0 Bq	-9 kBq
SPECIFIC ACTIVITY		4,833 Bq/kg	77 Bq/kg
WORK DAY			
WORK DAY START	07:00 AM		
PROCESSING START	07:30 AM		
PLANT STARTUP TIME		0.50 hr	
PROCESSING END	04:51 PM		
WORK DAY END	05:30 PM		
PLANT SHUTDOWN TIME		0.65 hr	
LUNCH PERIOD		0.5 hr	
WORK HOURS		10.0 hr	
MAX PROCESS HOURS (END-ST/		9.35 hr	
ACTUAL PROCESS HOURS (TOTA	AL 20-SEC SORT PERIODS)	8.24 hr	
TOTAL SYSTEM PAUSE TIME		0.00 hr	
TOTAL DOWNTIME (MAX-ACTUAL	.)	1.11 hr	
TIME UTILIZATION (ACTUAL )	IRS/WORK HRS)	82.3%	
TOTAL SOIL PROCESSING RECORDS (2-	SEC and 20-SEC)	2,579	
NONPROCESS RECORDS (Test, calibra	ation, etc)	29	
20-SEC PROCESS RECORDS		1,483	
TOTAL SORT		12 MD>0 & MND=0	
NO SORT		765 AD=0 & MD=0	
SOME SORT		706 AD>0&0 <md<mn< td=""><td>Dmax&amp;MND <mndmax< td=""></mndmax<></td></md<mn<>	Dmax&MND <mndmax< td=""></mndmax<>
UNEXPLAINED RECOR	DS	0	
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		
AD=0 &			
AD<0 &	HD 0		

14,830

		2-SEC RECORD	S WITH	SORTS		1,096	AP>0			
		2-SEC RECORD			IN >1 D	-				
			2 DETECT		245		79.0%			
			DETECT		53		17.1%			
			DETECT		8		2.6%			
			DETECT		2		0.6%			
			DETECT		1		0.3%			
			DETECT		1		0.3%			
			DETECT		0		0.0%			
			OTAL			310				
		NET 2-SEC RE	CORDS W	ITH SORTS		786				
		2-SEC PERIOD	S WITH	NO SORTS		14,044				
		AVG TIME BET	WEEN 2-	SEC SORTS		37.7	sec			
1-GATE S		534	ACT_ND		SPEC_A		ACT_P		FREQ%	ACT_P
DETECTO	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(pg)	(#)		(kBq)
1	22	4.1%	-14000	1	-261		4000	50	4.6%	4
2	41		-12000				8000		43.5%	8
3	86	16.1%	-10000	8			12000	196		12
4	97	18.2%	-8000				16000	101	9.2%	16
5	105	19.7%	-6000	9	-112		20000	58		20
6	100	18.7%	-4000	22	-75		24000	<b>3</b> 5	3.2%	24
7	65	12.2%	-2000	84	-37		28000	26	2.4%	28
8	18	3.4%	0	172	0		32000	24	2.2%	32
TOTAL	534		2000	224	37		36000	16	1.5%	36
			4000	273	75		40000	12	1.1%	40
2-GATE SC	ORTS	562	6000	242	112		44000	14	1.3%	44
DETECTO	SORTS	FREQ%	8000	187	149		48000	12	1.1%	48
8			10000	128	187		52000	4	0.4%	52
9	36	6.4%	12000	79	224		56000	5	0.5%	56
10	71	12.6%	14000	37	261		60000	8	0.7%	60
11	95	16.9%	16000	19	299		64000	7	0.6%	64
12	109	19.4%	18000	10	336		68000	5	0.5%	68
13	125	22.2%	20000	4	373		72000	4	0.4%	72
14	89	15.8%	22000	0	410		76000	2	0.2%	76
15	37	6.6%	24000	0	448		80000	7	0.6%	80
TOTAL	562		26000	0	485		84000	3	0.3%	84
			>28000	0	0		>84000	30	2.7%	>84
			TOTAL	1512			TOTAL	1096		
HP	Ε	1095		GATE1	1096					
MP.	Ε	735		GATE2	562					
DI		882		-						•

REC CODE EXPLANATION





SORTER 2 04-Nov-92								
AVERAGE BACKGROUND COUNT RATE		0.80	±	0.01	c/sec			
SORTER SOIL DENSITY		1.15	tons/m	15				
GROUND SOIL DENSITY			tons/m					
GROOMD SOIL DENSITY					CONTAM	INATED	CLEAN	
MASS TOTAL					2.17	tons	77.8 tons	
MAXIMUM/SORT					53.6	kg	53.6 kg	
MINIMUM/SORT					0.7	kg	45.5 kg	
WEIGHT RECOVERY OR VOLUME RECOV	/ERY							97.3%
EQUIVALENT SOIL-IN-GROUND					1.72	yd³	61.7 yd <sup>3</sup>	63.4 yd³/day
PARTICLE ACTIVITY (MAXIMUM EST	IMATE)							
TOTAL					13,832	kBq		
MAXIMUM/SORT					336	kBq		
MINIMUM/SORT					2.3	kBq		
DISPERSED + PARTICLE (REALISTIC	: ESTIMATE) ACTIVI	ΤΥ			7,328	kBq	9,785 k8q	
MAXIMUM/SORT					236	kBq	18 kBq	
MINIMUM/SORT					0	Bq	-5 kBq	
SPECIFIC ACTIVITY					3,374	Bq/kg	126 Bq/kg	
WORK DAY								
WORK DAY START	07:00 AM							
PROCESSING START	07:30 AM							
PLANT STARTUP TIME						0.50 hr		
PROCESSING END	04:51 PM							
WORK DAY END	05:30 PM							
PLANT SHUTDOWN TIME						0.66 hr		
LUNCH PERIOD						0.5 hr		
WORK HOURS						10.0 hr		
MAX PROCESS HOURS (END-S	TART)					9.35 hr		
ACTUAL PROCESS HOURS (TO	TAL 20-SEC SORT P	ER I 00	S)			8.29 hr		
TOTAL SYSTEM PAUSE TIME						0.00 hr		
TOTAL DOWNTIME (MAX-ACTU	AL)					1.05 hr		
TIME UTILIZATION (ACTUAL	HRS/WORK HRS)					82.9%		
TOTAL SOIL PROCESSING RECORDS (	2-SEC and 20-SEC)				2,373			
NONPROCESS RECORDS (Test, calib	eration, etc)				19			
20-SEC PROCESS RECORDS					1,493			
TOTAL SORT					17	MD>0 & MND=0	1	
NO SORT					681	AD=0 & MD=0	& MND>0	
SOME SORT					795	AD>0&0 <md<mn< td=""><td>Dmax&amp;MND<mndmax< td=""><td></td></mndmax<></td></md<mn<>	Dmax&MND <mndmax< td=""><td></td></mndmax<>	
UNEXPLAINED REC	ORDS				0			
_								

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AD=0 & MD

AD<0 & MD

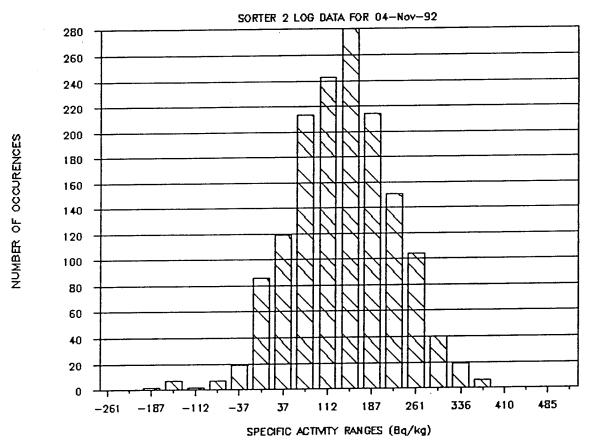
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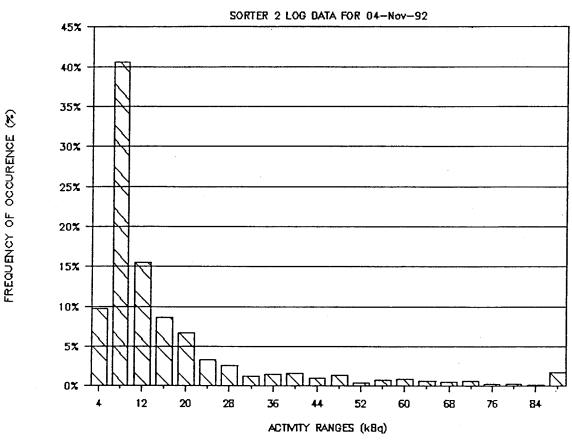
14,930

2-SEC COUNT PERIODS						14,730				
2-SEC RECORDS WITH SORTS						880	AP>0			
2-SEC RECORDS WITH POSITIVES					IN >1 D	ETECTOR				
2 DETECTORS					195		76.8%			
	3 DETECTORS						18.5%			
		4	4 DETECTO	RS	9		3.5%			
		9	DETECTO	RS	2		0.8%			
			S DETECTO	RS	1		0.4%			
		;	7 DETECTO	RS	0		0.0%			
		ŧ	B DETECTO	RS	0		0.0%			
		1	TOTAL			254				
		NET 2-SEC RE	CORDS WI	TH SORTS		626				
		2-SEC PERIOD	S WITH N	O SORTS		14,304				
		AVG TIME BET	WEEN 2-S	EC SORTS		47.7	sec			
1-GATE SO	ORTS	444	ACT_ND	NUMBER	SPEC_A		ACT_P	SORT	FREQ%	ACT_P
DETECTO	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(Bq)	(#)		(kBq)
1	23			0	-261		4000	85	9.7%	4
2	93		-12000	0	-224		8000	357		8
3	94		-10000	2	-187		12000	137		12
4	99		-8000	7	- 149		16000	76	8.6%	16
5	70		-6000	2	-112		20000	59		20
6	36		-4000	7	-75		24000	29		24
7	24		-2000	19	-37		28000	23		28
8	5	1.1%	0	<b>8</b> 6	0		32000	11	1.3%	32
TOTAL	444		2000	119	37		36000	13		36
			4000	213	75		40000	14	1.6%	40
2-GATE SC	RTS	436	6000	243	112		44000	9		44
DETECTO	SORTS	FREQ%	8000	280	149		48000	12	1.4%	48
8			10000	214	187		52000	3	0.3%	52
9	62	14.2%	12000	151	224		56000	7	0.8%	56
10	76	17.4%	14000	104	261		60000	8	0.9%	60
11	111	25.5%	16000	40	299		64000	6	0.7%	64
12	<b>8</b> 6	19.7%	18000	19	336		68000	5	0.6%	. 68
13	58	13.3%	20000	6	373		72000	6	0.7%	72
14	<b>3</b> 6	8.3%	22000	0	410		76000	2	0.2%	76
15	7	1.6%	24000	0	448		80000	2	0.2%	80
TOTAL	436		26000	0	485		84000	1	0.1%	84
			>28000	0	0		>84000	15	1.7%	>84
			TOTAL	1512			TOTAL	880		
	_									
HP		882		ATE1	880					
MP	t 	1100	G	ATE2	436					

REC CODE EXPLANATION

DISE 1262



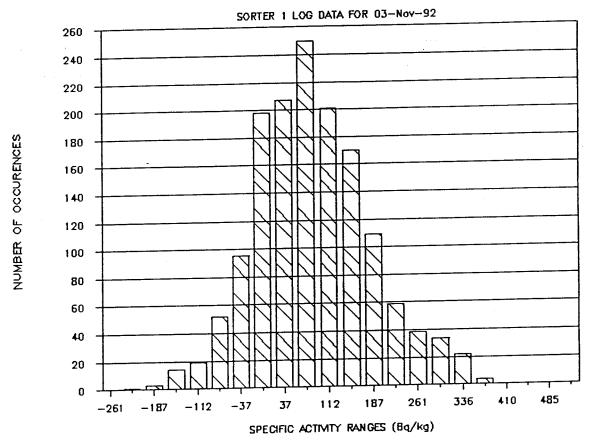


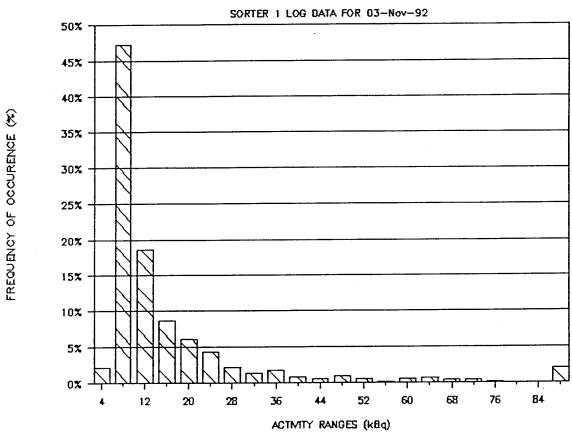
SORTER 1 03-Nov-92									
				0.07					
AVERAGE BACKGROUND COUNT RATE		0.79		0.03	c/sec				
SORTER SOIL DENSITY			tons/n						
GROUND SOIL DENSITY		1.03	tons/i		CONTAM	INATED	CLEA	u	
				•		tons		4 tons	
MASS TOTAL					53.6			6 kg	
MAXIMUM/SORT MINIMUM/SORT					0.7	-		9 kg	
MINIMON/ SOK									
WEIGHT RECOVERY OR VOLUME RECOVE	RY								97.6%
EQUIVALENT SOIL-IN-GROUND					1.49	yd³	59.8	B yd³	61.3 yd3/day
PARTICLE ACTIVITY (MAXIMUM ESTIM	ATE)								
TOTAL					20,038	kBq			
MAXIMUM/SORT					511	kBq			
MINIMUM/SORT					2.5	kBq			
DISPERSED + PARTICLE (REALISTIC	ESTIMATE) ACTIV	/ITY			7,683	kBq	5,347	7 kBq	
MAXIMUM/SORT					299	kBq	19	kBq	
MINIMUM/SORT					0	Bq		kBq	
SPECIFIC ACTIVITY					4,092	Bq/kg	71	l Bq/kg	
WORK DAY									
WORK DAY START	07:00 AM								
PROCESSING START	07:51 AM								
PLANT STARTUP TIME						0.85 hr	•		
PROCESSING END	05:00 PM								
WORK DAY END	05:30 PM								
PLANT SHUTDOWN TIME						0.51 hr	•		
LUNCH PERIOD						0.5 hr			
WORK HOURS						10.0 hr			
MAX PROCESS HOURS (END-ST						9.15 hr			
ACTUAL PROCESS HOURS (TOTA	AL 20-SEC SORT	PERIOD	(2)			8.02 hr			
TOTAL SYSTEM PAUSE TIME						0.00 hr			
TOTAL DOWNTIME (MAX-ACTUA						1.13 hr	•		
TIME UTILIZATION (ACTUAL )	HRS/WORK HRS)					80.1%			
TOTAL SOIL PROCESSING RECORDS (2	-SEC and 20-SEC	)			2,627				
NONPROCESS RECORDS (Test, calibra	ation, etc)				57				
20-SEC PROCESS RECORDS					1,443				
TOTAL SORT					11	MD>0 & MND	=0		
NO SORT						AD=0 & MD=			
SOME SORT					735	AD>0&0 <md<< td=""><td>M&gt;DMA&amp;xemONM</td><td>NDmax</td><td></td></md<<>	M>DMA&xemONM	NDmax	
UNEXPLAINED RECOF	RDS				0			•	
0 <ad<1kbq &="" md="">0</ad<1kbq>	2								
AD=0 8	MD 0								
AD<0 8	R MD 0								

14,430

2-SEC COUNT PERTOUS						14,430				
2-SEC RECORDS WITH SORTS						1,184 AP>0				
2-SEC RECORDS WITH POSITIVES 1					IN >1 DE	ETECTOR				
	2 DETECTORS					83.1%				
		3 DETECTORS				14.2%				
			DETECTO		8	2.6%				
		5	DETECTO	RS	0	0.0%				
			DETECTO		0	0.0%				
		7	DETECTO	)RS	0	0.0%				
			B DETECTO	RS	0	0.0%				
		1	OTAL			302				
		•								
		NET 2-SEC RE				882				
		2-SEC PERIOD				13,548				
		AVG TIME BET	WEEN 2-S	EC SORTS		32.7 sec				
1-GATE S	ORTS	596	ACT_ND	NUMBER	SPEC_A		ACT_P	SORT	FREQ%	ACT_P
DETECTO	SORTS	FREQ%	(Bq)		(Bq/kg)		(Bq)	(#)		(kBq)
1	15	2.5%	-14000	0	-261		4000	27	2.2%	4
2	61	10.0%	-12000	1	-224		8000	570	47.2%	8
3	88	14.5%	-10000	3	-187		12000	224	18.6%	12
4	105	17.3%	-8000	14	-149		16000	105	8.7%	16
5	117	19.2%	-6000	19	-112		20000	73	6.0%	20
6	122	20.1%	-4000	52	-75		24000	52	4.3%	24
7	78	12.8%	-2000	95	-37		28000	27	2.2%	28
8	22	3.6%	0	198	0		32000	17	1.4%	32
TOTAL	608		2000	207	37		36000	22	1.8%	36
			4000	250	75		40000	10	0.8%	40
2-GATE SC	ORTS	588	6000	201	112		44000	7	0.6%	44
DETECTO	SORTS	FREQ%	8000	170	149		48000	12	1.0%	48
8			10000	109	187		52000	7	0.6%	52
9	36	6.0%	12000	59	224		56000	2	0.2%	56
10	81	13.5%	14000	39	261		60000	7	0.6%	60
11	102	17.0%	16000	34	299	1	64000	8	0.7%	64
12	107	17.9%	18000	22	336		68000	5	0.4%	68
13	121	20.2%	20000	4	373		72000	5	0.4%	72
14	101	16.9%	22000	0	410		76000	2		76
15	51	8.5%	24000	0	448		80000	0	0.0%	80
TOTAL	599		26000	0	485		34000	1	0.1%	84
			>28000	0	0		34000	24	2.0%	>84
			TOTAL	1477		•	TOTAL	1207		
НР	E	1196	G	ATE1	1184					
MP		791		ATE2	588					
	SE	820	_		300					

REC CODE EXPLANATION





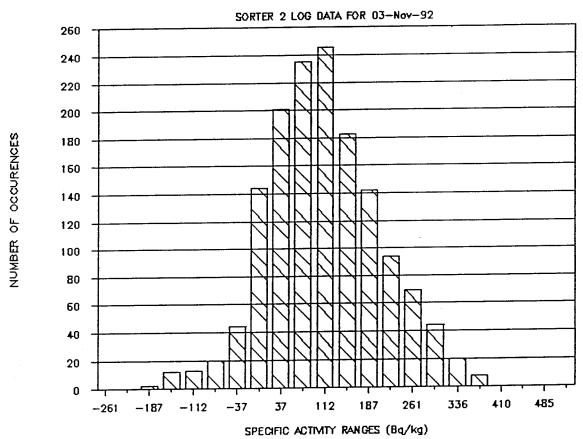
SORTER 2 03-1	iov-92				
AVERAGE BACKGROUND CO	DUNT RATE	0.80 ± 0.0	05 c/sec		
SORTER SOIL DENSITY		1.15 tons/m <sup>3</sup>			
GROUND SOIL DENSITY		1.65 tons/m³			
dicons core			CONTAMINATED	CLEAN	
MASS TOTAL			2.73 tons	75.0 tons	
MAXIMUM/SORT			53.6 kg	53.6 kg	
MINIMUM/SORT			0.7 kg	42.2 kg	
					96.5%
WEIGHT RECOVERY OR V			2.16 yd³	59.4 yd³	61.6 yd3/day
EQUIVALENT SOIL-IN-G	ROUND		2.10 /4	•	•
PARTICLE ACTIVITY (M	AYIMUM FSTIMATE)				
TOTAL			27,236 kBq		
MAXIMUM/SORT			2,044 kBq		
MINIMUM/SORT			2.3 kBq		
DISPERSED + PARTICLE	(REALISTIC ESTIMATE)	ACTIVITY	11,910 kBq	7,257 kBq	
MAXIMUM/SORT			1400 kBq	19 kBq	
MINIMUM/SORT			0 Bq	-12 kBq	
SPECIFIC ACTI	VITY		4,370 Bq/kg	97 Bq/kg	
WORK DAY	- 07-00 /	A M			
WORK DAY STAR					
PROCESSING ST	••••	nn	0.85 hr		
PLANT STARTUP		DM .			
PROCESSING EN	05:30 F				
WORK DAY END PLANT SHUTDOW			0.43 hr		
PEART SHOTOON		•	•		
LUNCH PERIOD			0.5 hr		
WORK HOURS			10.0 hr		
MAX PROCESS H	OURS (END-START)		9.23 hr		
ACTUAL PROCES	S HOURS (TOTAL 20-SEC	SORT PERIODS)	8.06 hr		
TOTAL SYSTEM	PAUSE TIME		0.00 hr		
	E (MAX-ACTUAL)		1.17 hr		
TIME UTILIZAT	ION (ACTUAL HRS/WORK H	RS)	80.5%		
TOTAL COLL DROCESCIA	G RECORDS (2-SEC and 20	0-SEC)	2,619		
	Test, calibration, etc		30		
MONPROCESS RECORDS (	rest, eather established	•			
20-SEC PROCES	S RECORDS		1,450		
	L SORT		23 MD>0 & MND=		
NO S	ORT		601 AD=0 & MD=0		
SOME	SORT		_	ANDmax&MND	
UNEX	PLAINED RECORDS		0		
0 <ad< td=""><td>&lt;1kBq &amp; MD&gt;0</td><td>0</td><td></td><td></td><td></td></ad<>	<1kBq & MD>0	0			
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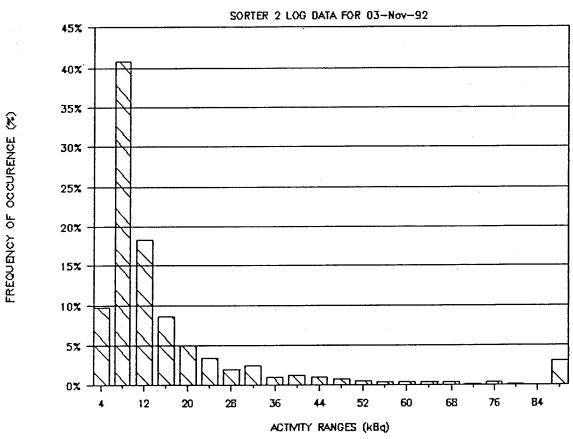
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AD<0 & MD 0

2-SEC COUNT PERIODS				-	14,500					
2-SEC RECORDS WITH SORTS				1,169	AP>0					
	2-SEC RECORDS WITH POSITIVES I			IN >1 D	ETECTOR					
			DETECTO		255		75.9%			
		3	DETECTO	RS	58		17.3%			
			DETECTO		15		4.5%			
			DETECTO		5		1.5%			
			DETECTO		3		0.9%			
			DETECTO		0		0.0%			
			DETECTO		0		0.0%			
		1	OTAL			336				
		NET 2-SEC RE	CORDS WI	TH SORTS		833				
		2-SEC PERIOD	S WITH N	O SORTS		13,667				
		AVG TIME BET	WEEN 2-S	EC SORTS		34.8	sec			
1-GATE SO	חסדפ	606	ACT ND	NUMBER	SPEC_A		ACT	P SORT	FREQ%	ACT_P
DETECTO	SORTS		(Bq)		(Bq/kg)		(Be			(kBq)
DETECTO	001110	711241	(04)		( - <b>,</b> - 3)		-			·
1	28	4.6%	-14000	0	-261		40	00 114	9.7%	4
2	98	16.1%	-12000	0	-224		80	00 478	40.8%	8
3	119	19.6%	-10000	2	-187		120	00 214	18.3%	12
4	124	20.4%	-8000	12	-149		160	00 101	8.6%	16
5	95	15.6%	-6000	13	-112		200	00 58	4.9%	20
6	<b>8</b> 6	14.1%	-4000	20	-75		240	00 40	3.4%	24
7	42	6.9%	-2000	44	-37		280	00 23	2.0%	28
8	16	2.6%	0	144	0		320	00 29	2.5%	32
TOTAL	608		2000	201	37		360	00 11	0.9%	36
			4000	235	<i>7</i> 5		400			40
2-GATE SO	ORTS	563	6000	246	112		440			44
DETECTO	SORTS	FREQ%	8000	.183	149		480			48
8			10000	142	187		520			52
9	55	9.8%	12000	94	224		5600			56
10	99	17.6%	14000	69	261		6000	00 4		60
11	130	23.0%	16000	44	299		6400			64
12	104	18.4%	18000	20	336		680		0.3%	68
13	79	14.0%	20000	8	373		7200			72
14	77	13.7%	22000	0	410		7600			76
15	20	3.5%	24000	0	448		8000			80
TOTAL	564		26000	0	485		8400			84
			>28000	0	0		>8400			>84
			TOTAL	1477			TOTA	L 1172		
HP	>F	1148		GATE1	1169					
MP		1192		GATE2	563					
	SE	1730								
	<b>-</b>									

REC CODE EXPLANATION



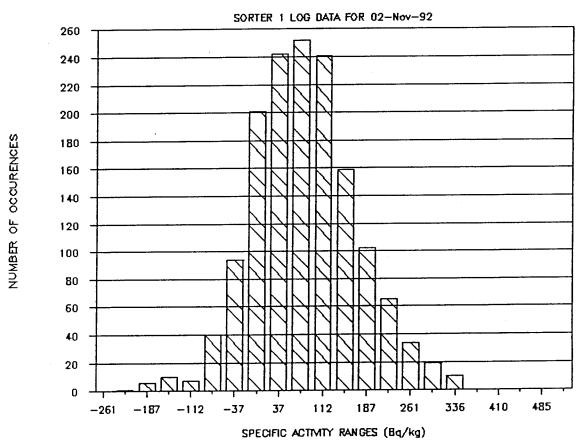


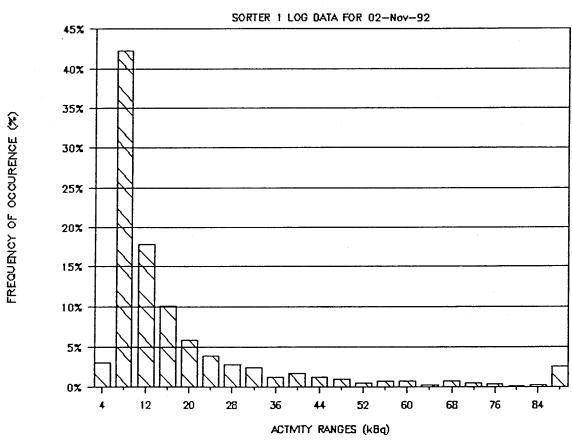
AVERAGE BACKGROUND COUNT RATE  SORTER SOIL DENSITY  1.15 tons/m*  CONTAMINATED  CONTAMINATED  CONTAMINATED  CONTAMINATED  CONTAMINATED  1.63 tons  76.5 tons  76.6 to	SORTER 1 02-Nov-92	-		
SORTER SOIL DEASITY	AVERAGE RACKGROUND COUNT RATE	0.79 ±	0.03 c/sec	
CONTAMINATED   CLEAN   CONTAMINATED   CLEAN   CONTAMINATED   CLEAN   CONTAMINATED   CLEAN		1.15 tons,	/m³	
MASS TOTAL   1.88		1.65 tons/	′m³	
MAST UNIAL  MATHAM/SORT  HIMINUM/SORT  MEIGHT RECOVERY OR VOLUME RECOVERY EQUIVALENT SOIL-IN-GROUND  PARTICLE ACTIVITY (MAXIMUM ESTIMATE)  TOTAL  MAXIMUM/SORT  MINIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MORK DAY  MORK DAY START  PROCESSING START  MORK DAY  MORK DAY START  PROCESSING START  MORK DAY  MORK DAY MO	GROOM SOLE SENSIVE		CONTAMINATED	CLEAN
MAXIMAM/SORT 1.53.6 kg 53.6 kg 44.2 kg  MHIMMU/SORT 2.7 kg 44.2 kg  MEIGHT RECOVERY OR VOLUME RECOVERY 2.7 CM 1.45 yd² 60.6 yd² 62.1 yd²/day  PARTICLE ACTIVITY (MAXIMUM ESTIMATE)  TOTAL	MASS TOTAL		1.83 tons	76.5 tons
MINIMUM/SORT 0.7 kg 44.2 kg  MEIGHT RECOVERY OR VOLUME RECOVERY EQUIVALENT SOIL-IN-GROUND 1.45 yd' 60.6 yd' 62.1 yd'/day  PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL ACTIVITY (MAXIMUM ESTIMATE) TOTAL SORT 8875 kBq 5,057 kBq MAXIMUM/SORT 3.1 kBq  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY 8,755 kBq 5,057 kBq 18 kBq HINIMUM/SORT 564 kBq 18 kBq 112 kBq 4,775 Bq/kg 66 Bq/kg  MORK DAY START 07:07 AM PROCESSING START 07:37 AM PROCESSING START 07:37 AM PLANT STARTUP TIME 0.62 hP  WORK DAY SHART 05:30 PM PLANT SHUTDONN TIME 0.510 PM  LUNCH PERICO 0.510 PM  ACTUAL PROCESS NOURS (END 5454 PM MAX PROCESS NOURS (END 5454 PM MAX PROCESS NOURS (END 5467 PM TOTAL SYSTEM PAUSE TIME 0.00 hr TOTAL SYSTEM	_		53.6 kg	53.6 kg
MAXIMAN SORT   1.45 yd'   60.6 yd'   62.1			0.7 kg	44.2 kg
Total   Security   S				97 74
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)  TOTAL  MAXIMUM/SORT  MINIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  MINIMUM/SORT  MAXIMUM/SORT  MINIMUM/SORT  MAXIMUM/SORT  MINIMUM/SORT  MORK DAY  WORK DAY  MORK DAY  MORK DAY START  PROCESSING START  PROCESSING START  PROCESSING START  PROCESSING END  O4:54 PM  WORK DAY START  PLANT STARTUP TIME  D.62 hr  PROCESSING END  O4:54 PM  WORK DAY END  DLANT SHUTDONN TIME  D.60 hr  LUNCH PERIOD  WORK HOURS  MAX PROCESS HOURS (IOTAL 20-SEC SORT PERIODS)  TOTAL SYSTEM PAUSE TIME  TOTAL SORT  TOTAL SOLT (MAX-ACTUAL)  TIME UTILIZATION (ACTUAL HRS/MORK HRS)  TOTAL SOLT (MAX-ACTUAL)  TOTAL SOLT (MAX-ACTUAL)  TOTAL SORT  OSORT  TOTAL SORT  OSORT  TOTAL SORT  NO SORT  SOME SORT  TOTAL SORT  SOME SORT  TOTAL SORT  TOTAL SORT  OCAD-THO & MID-D  TOTAL SORT  TOTAL		(	1 /5 2/3	* * * * * * * * * * * * * * * * * * * *
TOTAL  MAXIMUM/SORT  MINIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  MAXIMUM/SORT  MAXIMUM/SORT  MAXIMUM/SORT  MINIMUM/SORT  SPECIFIC ACTIVITY  MORK DAY  MORK DAY  MORK DAY START  PROCESSING START  07:00 AM  PROCESSING START  07:37 AM  PLANT STARTUP TIME  PROCESSING END  04:54 PM  MORK DAY END  05:30 PM  PLANT SHUTDOM TIME  LUNCH PERIOO  MORK HOURS  MAX PROCESS HOURS (END-START)  ACTUAL PROCESS HOURS (END-START)  TOTAL SOURS (END-START)  TOTAL SYSTEM PAUSE TIME  101AL SYSTEM PAUSE TIME  101AL DOWNTHE (MAX-ACTUAL)  TIME UTILIZATION (ACTUAL HRS/WORK HRS)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  TOTAL SORT  NO SORT  SOME SORT  NO SORT  SOME SORT  0-AD-0 & MD-0  AD-0 & MD-0  10-AD-1 & MD-0  MORD AD-0 & MND-0  TOTAL SORT  TOTAL DOWNTHOR (AND-0)  TOTAL SORT  SOME SORT  0-AD-1 & MD-0  AD-0 & MD-0  TOTAL SORD-4 HND-0  TOTAL SORD-4 HND-0  TOTAL SORT  TOTAL SORT  O-AD-1 & MD-0  AD-0 & MD-0  TOTAL SORD-4 HND-0  TOTAL SORD-4 HND-0  TOTAL SORD-4 HND-0  TOTAL SORT  TOTAL SORT  O-AD-1 & MD-0  AD-0 & MD-0  TOTAL SORD-4 HND-0  TOTAL SORT  TOTAL SORT  O-AD-1 & MD-0  AD-0 & MD-0  TOTAL SORD-4 HND-0  TOTAL SORT  TOTAL SORT  O-AD-1 & MD-0  AD-0 & MD-0  TOTAL SORD-4 HND-0  TOTAL SORD-4 HND-0  TOTAL SORT  TOTAL SORT  TOTAL SORT  UNEXPLAINED RECORDS  1 AD-0 & MD-0  TOTAL SORD-4 HND-0  AD-0 & MD-0  TOTAL SORD-4 HND-0  TOTAL SORT  TOT	EQUIVALENT SOIL-IN-GROUND		1.43 yu-	00.0 /4 00.1 /2 /22/
TOTAL  MAXIMUM/SORT  MINIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  MAXIMUM/SORT  MAXIMUM/SORT  MAXIMUM/SORT  SPECIFIC ACTIVITY  MORK DAY  MORK DAY START  PROCESSING START  O7:00 AM  PROCESSING START  O7:37 AM  PLANT STARTUP TIME  PROCESSING END  O4:54 PM  MORK DAY START O7:37 AM  PLANT STARTUP TIME  PROCESSING END  O4:54 PM  MORK DAY END  O5:30 PM  PLANT SHUTDOM TIME  LUNCH PERIOO  MORK HOURS  MAX PROCESS HOURS (END-START)  ACTUAL PROCESS HOURS (END-START)  TOTAL SYSTEM PAUSE TIME  O0.00 hr  TOTAL SYSTEM PAUSE TIME  O1.00 hr  TOTAL SYSTEM PAUSE TIME  O1.00 hr  TOTAL SONT  TOTAL SONT  TOTAL SONT  TOTAL SONT  O0.00 hr  10.17 hr  TIME UTILIZATION (ACTUAL HRS/WORK HRS)  TOTAL SORT  NO SORT  SOME SORT  O1.402  MOR MODOR MID-0  MOR MID-0	DADITICIE ACTIVITY (MAXIMUM ESTIMA)	(E)		
MAXIMUM/SORT DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  B, 755 kBq 5,057 kBq MAXIMUM/SORT MAXIMUM/SORT MINIMUM/SORT SPECIFIC ACTIVITY  MORK DAY  MORK DAY START PROCESSING START O7:00 AM PROCESSING START O7:37 AM PLANT STARTUP TIME PROCESSING STOR MORK DAY END O5:30 PM  PLANT SHUTDONN TIME  LUNCH PERIOD MORK HOURS MAX PROCESS HOURS (END-START) ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS) TOTAL SYSTEM PAUSE TIME TOTAL DOWNTHE (MAX-ACTUAL) TIME UTILIZATION (ACTUAL HRS/MORK HRS)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,727 NONPROCESS RECORDS (TEST, calibration, etc)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 20-SEC PROCESS RECORDS (TEST, calibration, etc)  TOTAL SORT NO SORT SOME SORT O-AD-0 & MD 0  10  MORE MIND=0  TOTAL SORT FOR AD-0 & MIND=0  TOTAL SORT TOTAL SOR			24,309 kBq	
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY 8,755 kBq 5,057 kBq  MAXIMUM/SORT 564 kBq 18 kBq  HINIMUM/SORT 6 Bq -12 kBq  SPECIFIC ACTIVITY 4,775 Bq/kg 66 Bq/kg  WORK DAY  WORK DAY START 07:00 AM  PROCESSING START 07:37 AM  PLANT STARTUP TIME 0.62 hr  PROCESSING END 04:54 PM  WORK DAY END 05:30 PM  PLANT SHUTDONN TIME 0.50 hr  LUNCH PERIOD 10.60 hr  MORK HOURS 10.00 hr  ACTUAL PROCESS HOURS (EMD-START) 9.29 hr  ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS) 8.12 hr  TOTAL SYSTEM PAUSE TIME 0.00 hr  TOTAL DOWNTHE (MAX-ACTUAL) 1.17 hr  TIME UTILITZATION (ACTUAL HRS/WORK HRS) 81.2%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,727  NONPROCESS RECORDS (Test, calibration, etc) 21  20-SEC PROCESS RECORDS 11,462  TOTAL SORT 9 M0>0 & MND=0  TOTAL SORT 9 M0>0 & MND=0  TOTAL SORT 9 M0>0 & MND=0  TOTAL SORT 777 AD>080-440-4NDmax&MND-4NDmax  UNEXPLAINED RECORDS (1-14 processed to the color of the col			893 kBq	•
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  HAXIMUM/SORT  SPECIFIC ACTIVITY   MORK DAY  MORK DAY  MORK DAY START  O7:00 AH  PROCESSING START  O7:37 AM  PLANT STARTUP TINE  PROCESSING END  O4:54 PH  MORK DAY SHUD O5:30 PH  PLANT SHUTDOWN TIME  LUNCH PERIOD  MORK HOURS  MAX PROCESS HOURS (END-START)  ACTUAL PROCESS HOURS (END-START)  ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS)  TOTAL SYSTEM PAUSE TIME  TOTAL DOWNTIME (MAX-ACTUAL)  TIME UTILIZATION (ACTUAL MRS/MORK HRS)  TOTAL SOIL PROCESSING RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  TOTAL SORT  NO SORT  AD=0 & MO=0 & MND=0  FOR AD=0 & MD=0 & MND>0  TOTAL SYSTEM PAUSE TIME  TOTAL SOIL PROCESSING RECORDS  TOTAL SOIL PROCESS RECORDS  TOTAL SOIL PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  O 4AD <td></td> <td></td> <td>3.1 kBq</td> <td></td>			3.1 kBq	
MAXIMUM/SORT HINIMUM/SORT SPECIFIC ACTIVITY  WORK DAY  WORK DAY  WORK DAY  WORK DAY START O7:00 AM PROCESSING START O7:37 AM PLANT STARTUP TIME PROCESSING END O4:54 PM WORK DAY END O5:30 PM PLANT SHUTDOWN TIME  LUNCH PERIOD WORK HOURS MAX PROCESS HOURS (TOTAL 20-SEC SORT PERIODS) ACTUAL SYSTEM PAUSE TIME TOTAL SYSTEM PAUSE TIME TOTAL SOIL PROCESSING RECORDS TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) NONPROCESS RECORDS TOTAL SOIL PROCESSING RECORDS TOTAL SOIL PROCESS RECORDS TOTAL SOIL SORT NO SORT SOME SONT SOME SONT O-SAD SHND=0  FOR ABOUND SHND=0  F	manding cont			
MAXIMUM/SORT   1564 kBq   18	DISPERSED + PARTICLE (REALISTIC ES	STIMATE) ACTIVITY	8,755 kBq	5,057 kBq
######################################			564 kBq	18 kBq
WORK DAY    MORK DAY START   07:00 AM   PROCESSING START   07:37 AM   0.62 hr	MINIMUM/SORT		0 Bq	-12 kBq
MORK DAY START	SPECIFIC ACTIVITY		4,775 Bq/kg	66 Bq/kg
MORK DAY START				
PROCESSING START 07:37 AM  PLANT STARTUP TIME PROCESSING END 04:54 PM  WORK DAY END 05:30 PM  PLANT SHUTDOWN TIME  LUNCH PERIOO 0.60 hr  LUNCH PERIOO 0.5 hr  MAX PROCESS HOURS (END-START) 9.29 hr  ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS) 8.12 hr  TOTAL SYSTEM PAUSE TIME 0.00 hr  TIME UTILIZATION (ACTUAL HRS/WORK HRS) 1.17 hr  TIME UTILIZATION (ACTUAL HRS/WORK HRS) 81.2%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,727  NONPROCESS RECORDS (Test, calibration, etc) 21  20-SEC PROCESS RECORDS 1,462  TOTAL SORT 9 MD>0 & MND=0  TOTAL SORT 676 AD=0 & MD=0 & MND>0  TOTAL SORT 777 AD>020-<4N-C+NNDmax&MND  TOTAL SONT 777 AD>020-<4N-C+NNDmax&MND  TOTAL SORT 777 AD>020-<4NNDmax&MND  TOTAL SORT 777 AD>020-<4NNDma	WORK DAY			
PLANT STARTUP TIME PROCESSING END 04:54 PM WORK DAY END 05:30 PM PLANT SHUTDOWN TIME  LUNCH PERIOD 0.60 hr  LUNCH PERIOD 0.5 hr MORK HOURS 10.0 hr MAX PROCESS HOURS (END-START) 9.29 hr ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS) 8.12 hr TOTAL SYSTEM PAUSE TIME 0.00 hr TOTAL SYSTEM PAUSE TIME 1.17 hr TIME UTILIZATION (ACTUAL HRS/MORK HRS) 81.2%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,727 NONPROCESS RECORDS (Test, calibration, etc) 21  20-SEC PROCESS RECORDS 1,462 TOTAL SORT 9 MD>0 & MND=0 TOTAL SORT 676 AD=0 & MD=0 & MND>0 TOTAL SORT 777 AD>0&0-MD-MNDmax&MND-MNDmax UMEXPLAINED RECORDS 0-AD<1kbq & MD>0  AD=0 & MD D 1 AD=0 & MD D 0	WORK DAY START			
PROCESSING END 04:54 PM  WORK DAY END 05:30 PM  PLANT SHUTDOWN TIME 0.60 hr  LUNCH PERIOO 0.5 hr  MORK HOURS 10.0 hr  MAX PROCESS HOURS (END-START) 9.29 hr  ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS) 8.12 hr  TOTAL SYSTEM PAUSE TIME 0.00 hr  TOTAL DOWNTIME (MAX-ACTUAL) 1.17 hr  TIME UTILIZATION (ACTUAL HRS/WORK HRS) 81.2%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,727  NONPROCESS RECORDS (Test, calibration, etc) 21  20-SEC PROCESS RECORDS 1,462  TOTAL SORT 9 MD>0 & MND=0  NO SORT 9 MD>0 & MND=0  TOTAL SORT 676 AD=0 & MD=0 & MND>0  O <ad<11kbq &="" md="">0 1  AD=0 &amp; MD &gt;0 1  AD=0 &amp; MD &gt;0 1  AD=0 &amp; MD &gt;0 1</ad<11kbq>	PROCESSING START	07:37 AM	0.42 hr	
MORK DAY END   05:30 PM			U.62 NF	
PLANT SHUTDOWN TIME  LUNCH PERIOD  MORK HOURS  MAX PROCESS HOURS (END-START)  ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS)  TOTAL SYSTEM PAUSE TIME  TOTAL DOWNTIME (MAX-ACTUAL)  TIME UTILIZATION (ACTUAL HRS/MORK HRS)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 <ad<1 &="" kg="" md="">0  1  AD=0 &amp; MD &gt; 0  0  0.5 hr  10.0 hr  9.29 hr  8.12 hr  0.00 hr  1.17 hr  1.17 hr  81.2%  1.462  2,727  21  20-SEC PROCESSING RECORDS  1,462  TOTAL SORT  9 MD&gt;0 &amp; MND=0  676 AD=0 &amp; MD=0 &amp; MND&gt;0  777 AD&gt;0&amp;0&lt;4ND&lt;4NDMmax&amp;MND&lt;4NDmax  4NDMDmax&amp;MND&lt;4NDmax  4NDMDmax  4N</ad<1>	PROCESSING END			
LUNCH PERIOD  WORK HOURS  MAX PROCESS HOURS (END-START)  ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS)  TOTAL SYSTEM PAUSE TIME  TOTAL DOWNTIME (MAX-ACTUAL)  TIME UTILIZATION (ACTUAL HRS/WORK HRS)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  2,727  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 <ad<1kbq &="" md="">0  1  AD=0 &amp; MD  0  0.5 hr  10.0 hr  9.29 hr  0.00 hr  1.17 hr  1.17 hr  1.17 hr  21.727  27.777  81.2%</ad<1kbq>		05:30 PM	0.40 hr	
WORK HOURS  MAX PROCESS HOURS (END-START)  ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS)  TOTAL SYSTEM PAUSE TIME  TOTAL DOWNTIME (MAX-ACTUAL)  TIME UTILIZATION (ACTUAL HRS/WORK HRS)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 <ad-1 &="" kbq="" md="">0  10.0 hr  9.29 hr  8.12 hr  0.00 hr  1.17 hr  1.17 hr  81.2%  2,727  21  1,462  9 MD&gt;0 &amp; MND=0  676 AD=0 &amp; MD=0  8 MD=0  8 MD=0 &amp; MND&gt;0  777 AD&gt;08-04MD-MNDmax&amp;MND-MNDmax  0 VAD-1 kBq &amp; MD&gt;0  1 AD=0 &amp; MD D  1 AD=0 &amp; MD D  1 AD=0 &amp; MD D</ad-1>	PLANT SHUTDOWN TIME		0.00 III	
WORK HOURS	LUNCH PERIOD		0.5 hr	
MAX PROCESS HOURS (END-START)  ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS)  8.12 hr  107AL SYSTEM PAUSE TIME  TOTAL DOWNTIME (MAX-ACTUAL)  TIME UTILIZATION (ACTUAL HRS/WORK HRS)  1.17 hr  TIME UTILIZATION (ACTUAL HRS/WORK HRS)  2,727  NONPROCESS RECORDS (2-SEC and 20-SEC)  2,727  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  1,462  TOTAL SORT  NO SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 <ad<11kbq &="" md="">0  1  AD=0 &amp; MD &gt; 0  1  AD=0 &amp; MD &gt; 0</ad<11kbq>			10.0 hr	
ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS)  TOTAL SYSTEM PAUSE TIME  TOTAL DOWNTIME (MAX-ACTUAL)  TIME UTILIZATION (ACTUAL HRS/WORK HRS)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  PROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 <ad<1kbq &="" md="">0  1 AD=0 &amp; MD 0</ad<1kbq>		RT)	9.29 hr	
TOTAL SYSTEM PAUSE TIME  TOTAL DOWNTIME (MAX-ACTUAL)  TIME UTILIZATION (ACTUAL HRS/WORK HRS)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  RONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 < AD=0 & MD>0  1			8.12 hr	
TOTAL DOUNTINE (MAX-ACTUAL)  TIME UTILIZATION (ACTUAL HRS/WORK HRS)  1.17 hr  81.2%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  2,727  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 <ad-0 &="" md="">0  1  AD-0 &amp; MD&gt;0  1  1.17 hr  81.2%  1.462  2,727  21  21  40  40  40  40  40  40  40  40  40  4</ad-0>			0.00 hr	
TIME UTILIZATION (ACTUAL HRS/WORK HRS)  81.2%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  2,727  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  1,462  9 MD>0 & MND=0  676 AD=0 & MD=0 & MND>0  TOTAL SORT  SOME SORT  UNEXPLAINED RECORDS  0 <ad<1kbq &="" md="">0  1  AD=0 &amp; MD  0</ad<1kbq>			1.17 hr	
21   20-SEC PROCESS RECORDS   1,462   9 MD>0 & MND=0   676 AD=0 & MD=0 & MND>0   777 AD>0&0-MNDmax&MND			81.2%	
21   20-SEC PROCESS RECORDS   1,462   9 MD>0 & MND=0   676 AD=0 & MD=0 & MND>0   777 AD>0&0-MNDmax&MND	TOTAL SOLI PROCESSING RECORDS (2-5	SEC and 20-SEC)	2,727	
20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 < AD < 1 kBq & MD > 0  1,462  9 MD > 0 & MND = 0  676 AD = 0 & MD = 0 & MND > 0  777 AD > 0 & MND = 0  0 < AD < 1 kBq & MD > 0  1  AD = 0 & MD  0				
TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 < AD < 1 kBq & MD > 0  MD = 0 & MND = 0  676 AD = 0 & MD = 0 & MND > 0  777 AD > 0 & 0 & 0 & 0 & 0 & 0  0 < AD < 1 kBq & MD > 0  1  AD = 0 & MD  0		,		
NO SORT 676 AD=0 & MD=0 & MND>0  SOME SORT 777 AD>0&0 <md<mndmax&mnd<mndmax &="" 0<ad<1kbq="" md="" records="" unexplained="">0 1 AD=0 &amp; MD 0</md<mndmax&mnd<mndmax>	20-SEC PROCESS RECORDS		1,462	
SOME SORT  UNEXPLAINED RECORDS  0 <ad<1kbq &="" md="">0  AD=0 &amp; MD  0</ad<1kbq>	TOTAL SORT		9 MD>0 & MND=0	)
UNEXPLAINED RECORDS 0  0 < AD < 1 kBq & MD > 0  AD = 0 & MD 0	NO SORT			
0 <ad<1kbq &="" hd="">0 1 AD=0 &amp; HD 0</ad<1kbq>	SOME SORT		777 AD>0&0 <hd<hi< td=""><td>IDmax&amp;MND<mndmax< td=""></mndmax<></td></hd<hi<>	IDmax&MND <mndmax< td=""></mndmax<>
AD=0 & MD 0	UNEXPLAINED RECORD	s	0	
	0 <ad<1kbq &="" md="">0</ad<1kbq>	1		
AD<0 & MD 0	& 0=0A	MD 0		
	AD<0 &	MD 0		

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2	-SEC CO	UNT PERIODS			-	14,620					
_		2-SEC RECORD	S WITH S	ORTS		1,265					
		2-SEC RECORD			IN >1 D						
			DETECTO		283		84.2%				
			DETECTO		46		13.7%				
			DETECTO		7		2.1%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
			OTAL			336					
		NET 2-SEC RE	CORDS WI	TH SORTS		929					
•		2-SEC PERIOD	S WITH N	O SORTS		13,691					
		AVG TIME BET	WEEN 2-S	EC SORTS		31.5	sec				
1-GATE S	ORTS.	620	ACT_ND	NUMBER	SPEC A		A	CT_P	SORT	FREQ%	ACT_P
DETECTO	SORTS		(Bq)		(Bq/kg)			_ (Bq)	(#)		(kBq)
52.20.0	000	V.1,0	(-4)		1-4-37			. ,.	• • •		
1	20	3.2%	-14000	0	-261		4	4000	39	3.1%	4
2	65	10.5%	-12000	1	-224		1	8000	534	42.2%	8
3	103	16.6%	-10000	6	-187		12	2000	225	17.8%	12
4	103	16.6%	-8000	10	-149		10	5000	128	10.1%	16
5	112	18.1%	-6000	7	-112		20	0000	74	5.8%	20
6	109	17.6%	-4000	40	-75		24	4000	- 49	3.9%	24
7	89	14.4%	-2000	94	-37		28	3000	35	2.8%	28
8	19	3.1%	0	201	0		37	2000	31	2.5%	32
TOTAL	620		2000	242	37		36	5000	15	1.2%	36
			4000	252	75		40	0000	21	1.7%	40
2-GATE SO	ORTS	645	6000	241	112		44	000	16	1.3%	44
DETECTO	SORTS	FREQ%	8000	159	149		48	3000	12	0.9%	48
8			10000	102	187		52	2000	6	0.5%	52
9	49	7.6%	12000	65	224		56	5000	9	0.7%	56
10	82	12.7%	14000	34	261		60	0000	10	0.8%	60
11	116	18.0%	16000	19	299		64	000	4	0.3%	64
12	112	17.4%	18000	10	336		68	3000	9	0.7%	68
13	127	19.7%	20000	0	373		72	2000	6	0.5%	72
14	107	16.6%	22000	0	410		76	000	5	0.4%	76
15	52	8.1%	24000	0	448		80	0000	2	0.2%	80
TOTAL	645		26000	0	485		84	000	3	0.2%	84
			>28000	0	0		>84	000	32	2.5%	>84
			TOTAL	1483			TC	TAL	1265		
	_										
HF		1265		CATE1	1265						
MF		802	(	GATE2	645						
DI	SE	673									

REC CODE EXPLANATION





02 Nov. 02						
SORTER 2 02-Nov-92						
AVERAGE BACKGROUND COUNT RATE	8.0	±	0.04 c/sec			
SORTER SOIL DENSITY	1.1	tons/	m³			
GROUND SOIL DENSITY	1.6	tons/				
				MINATED	CLEAN	
MASS TOTAL				1 tons	75.6 tons	
MAXIMUM/SORT				6 kg	53.6 kg	
MINIMUM/SORT			0.	7 kg	42.8 kg	
WEIGHT RECOVERY OR VOLUME RECOVE	RY					96.4%
EQUIVALENT SOIL-IN-GROUND			2.2	2 yd³	60.0 yd <sup>3</sup>	62.2 yd <sup>3</sup> /day
PARTICLE ACTIVITY (MAXIMUM ESTIM	ATE)					
TOTAL			22,55	8 kBq	•	
MAXIMUM/SORT			94	4 kBq		
MINIMUM/SORT			2.	3 kBq		
DISPERSED + PARTICLE (REALISTIC	ESTIMATE) ACTIVITY		12,98	0 kBq	7,099 kBq	
MAXIMUM/SORT			59	0 kBq	19 kBq	
MINIMUM/SORT				0 Bq	-13 kBq	
SPECIFIC ACTIVITY			4,62	7 Bq/kg	94 Bq/ks	1
WORK DAY						
WORK DAY START	07:00 AM					
PROCESSING START	07:37 AM					
PLANT STARTUP TIME				0.62 hr		
PROCESSING END	04:56 PM					
WORK DAY END	05:30 PM					
PLANT SHUTDOWN TIME				0.57 hr		
LUNCH PERIOD				0.5 hr		
WORK HOURS				10.0 hr		
MAX PROCESS HOURS (END-ST				9.31 hr		
ACTUAL PROCESS HOURS (TOTAL	AL 20-SEC SORT PERIO	)OS)		8.13 hr		
TOTAL SYSTEM PAUSE TIME				0.00 hr		
TOTAL DOWNTIME (MAX-ACTUA	L)			1.18 hr		
TIME UTILIZATION (ACTUAL	HRS/WORK HRS)			81.3%		
TOTAL SOIL PROCESSING RECORDS (2	-SEC and 20-SEC)		2,55			
NONPROCESS RECORDS (Test, calibrate	ation, etc)		1	3		
20-SEC PROCESS RECORDS			1,46	4		
TOTAL SORT			•	3 MD>0 & MND=		
NO SORT			• -	1 AD=0 & MD=0		
SOME SORT					INDmax&MND <mndmax< td=""><td></td></mndmax<>	
UNEXPLAINED RECO	RDS			0	•	
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AD=0 8	R MD 0					
AD<0 8	R MD 0					

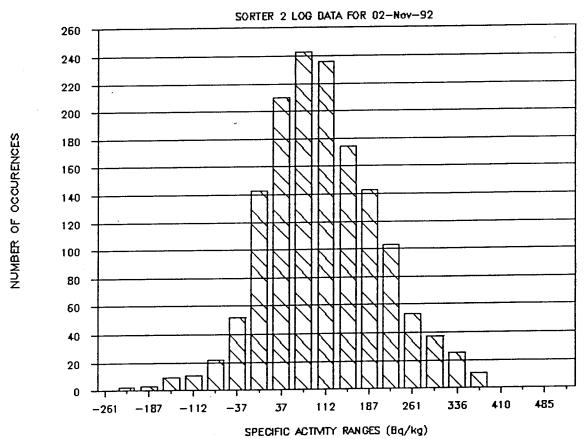
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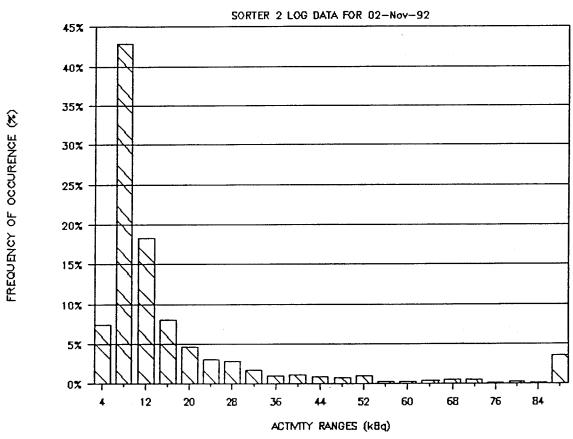
14,640

2	-SEC CO	UNT PERIODS				14,640				
		2-SEC RECORD	S WITH S	ORTS		1,095	AP>0			
		2-SEC RECORD	S WITH P	OSITIVES		ETECTOR				
		2	DETECTO	RS	257		75.6%			
		3	DETECTO	RS	66		19.4%			
		4	DETECTO	RS	15		4.4%			
		5	DETECTO	RS	1		0.3%			
		6	DETECTO	RS	1		0.3%			
		7	DETECTO	RS	0		0.0%			
		8	DETECTO	RS	0		0.0%			
		Т	OTAL			340				
						700				
		NET 2-SEC RE				755				
		2-SEC PERIOD				13,885 38.8				
		AVG TIME BET	WEEN 2-3	EL SOKIS		30.0	sec			
1-GATE S	ORTS	570	ACT_ND	NUMBER	SPEC_A		ACT_P	SORT	FREQ%	ACT_P
DETECTO	SORTS	FREQ%	(Bq)		(Bq/kg)		(Bq)	(#)		(kBq)
1	30	5.3%	-14000	0	-261		4000	81	7.4%	4
2	112	19.6%	-12000	2	-224		8000	470	42.9%	8
3	123	21.6%	-10000	3	-187		12000	201	18.4%	12
4	106	18.6%	-8000	9	-149		16000	88	8.0%	16
5	86	15.1%	-6000	11	-112		20000	51	4.7%	20
6	74	13.0%	-4000	22	-75		24000	34	3.1%	24
7	34	6.0%	-2000	52	-37		28000	31	2.8%	28
8	5	0.9%	0	143	0		32000	19	1.7%	32
TOTAL	570		2000	210	37		36000	11	1.0%	36
			4000	243	75		40000	12	1.1%	40
2-GATE SC	ORTS	525	6000	236	112		44000	10	0.9%	44
DETECTO	SORTS	FREQ%	8000	174	149		48000	9	0.8%	48
8			10000	143	187		52000	11	1.0%	52
9	67	12.8%	12000	103	224		56000	3	0.3%	56
10	93	17.7%	14000	53	261		60000	3	0.3%	60
11	129	24.6%	16000	37	299		64000	4	0.4%	64
12	95	18.1%	18000	25	336		68000	6	0.5%	68
13	79	15.0%	20000	11	373		72000	5	0.5%	72
14	50	9.5%		0	410		76000	2		76
15	12	2.3%	24000	0	448		80000	3		80
TOTAL	525		26000	0	485		84000	2		84
			>28000	0	0		>84000	39	3.6%	>84
			TOTAL	1477			TOTAL	1095		
HF	)F	1080		GATE1	1095					
MF		2125		GATE2	525					
	SE	985	`		223					
0.		,,,,								

REC CODE EXPLANATION

2-SEC COUNT PERIODS





SORTER 1 31-Oct-92			
AVERAGE BACKGROUND COUNT RATE	0.80 ±	0.01 c/sec	
	1.15 tons/		
SORTER SOIL DENSITY	1.65 tons/		
GROUND SOIL DENSITY	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	CONTAMINATED	CLEAN
MACC TOTAL		0.98 tons	73.0 tons
MASS TOTAL  MAXIMUM/SORT		8 kg	53.6 kg
MINIMUM/SORT		0.7 kg	45.5 kg
ATRINOIS SOCI			
WEIGHT RECOVERY OR VOLUME RECOVER	RY		98.7%
EQUIVALENT SOIL-IN-GROUND		0.78 yd«	57.8 yd« 58.6 yd«/day
THE STATE OF THE S	TE)		
PARTICLE ACTIVITY (MAXIMUM ESTIMA	(15)	21,859 kBq	
TOTAL		1,072 kBq	
MAXIMUM/SORT		3.0 kBq	
MINIMUM/SORT		•	
DISPERSED + PARTICLE (REALISTIC E	STIMATE) ACTIVITY	7,372 kBq	3,276 kBq
MAXIMUM/SORT	•	606 kBq	19 kBq
MINIMUM/SORT		0 Bq	-15 kBq
SPECIFIC ACTIVITY		7,491 Bq/kg	45 Bq/kg
WORK DAY			
WORK DAY START	07:00 AM		
PROCESSING START	07:49 AM		
PLANT STARTUP TIME		0.83 hr	
PROCESSING END	04:31 PM		
WORK DAY END	05:30 PM	0.98 hr	
PLANT SHUTDOWN TIME		0.98 111	
LUNCH PERIOD		0.5 hr	
WORK HOURS		10.0 hr	
MAX PROCESS HOURS (END-STA	ART)	8.69 hr	
ACTUAL PROCESS HOURS (TOTA		7.67 hr	
TOTAL SYSTEM PAUSE TIME		0.00 hr	
TOTAL DOWNTIME (MAX-ACTUAL	.)	1.03 hr	
TIME UTILIZATION (ACTUAL F	IRS/WORK HRS)	76.6%	•
TOTAL SOIL PROCESSING RECORDS (2-	SEC and 20-SEC)	2,296	
NONPROCESS RECORDS (Test, calibra		45	
20-SEC PROCESS RECORDS		1,380	
TOTAL SORT		0 MD>0 & MND=	0
NO SORT		785 AD=0 & MD=0	& MND>0
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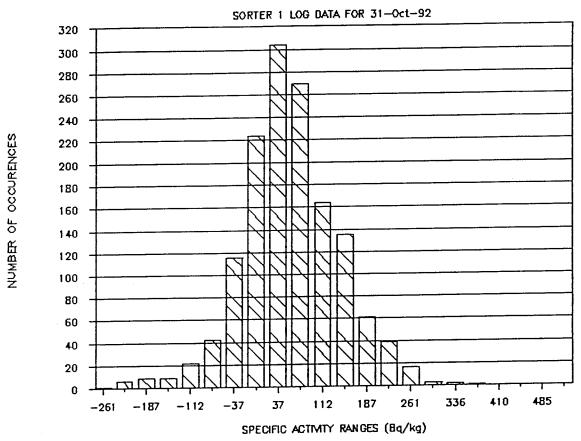
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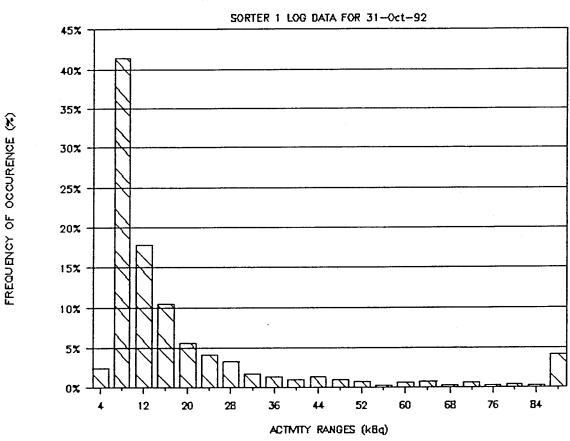
2	-SEC CO	UNI PERIODS				13,800				
		2-SEC RECORD	S WITH S	ORTS		916	AP>0			
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 D	ETECTOR				
		2	DETECTO	RS	213		80.1%			
		3	DETECTO	RS	47		17.7%			
		4	DETECTO	RS	5		1.9%			
		5	DETECTO	RS	1		0.4%			
		6	DETECTO	RS	0		0.0%			
		7	DETECTO	RS	0		0.0%			
		8	DETECTO	RS	0		0.0%			
		1	OTAL			266				
		NET 2-SEC RE	CORDS WI	TH SORTS		650				
		2-SEC PERIOD	S WITH N	O SORTS		13,150				
		AVG TIME BET	WEEN 2-S	EC SORTS		42.5	sec			
1 CATE C	ORTE	466	ACT NO	MIMPED	SPEC_A		ACT_P	SUBT	FREQ%	ACT_P
1-GATE SO	SORTS		ACT_ND (Bq)		(Bq/kg)		(Bq)	(#)	I KLUM	(kBq)
DETECTO	SUKTS	rktwa	(64)	(#)	(bq/kg/		(047	(")		
1	5	1.1%	-14000	1	-261		4000	22	2.4%	4
2	22	4.7%	-12000	6	-224		8000	380	41.5%	8
3	69	14.8%	-10000	9	-187		12000	163	17.8%	12
4	79	17.0%	-8000	9	- 149		16000	95	10.4%	16
5	84	18.0%	-6000	22	-112		20000	51	5.6%	20
6	103	22.1%	-4000	42	-75		24000	38	4.1%	24
7	78	16.7%	-2000	116	-37		28000	30	3.3%	28
8	26	5.6%	0	224	0		32000	16	1.7%	32
TOTAL	466		2000	304	37		36000	12	1.3%	36
			4000	270	75		40000	9	1.0%	40
2-GATE SC	ORTS	450	6000	164	112		44000	12	1.3%	44
DETECTO	SORTS	FREQ%	8000	<b>13</b> 5	149		48000	9	1.0%	48
8			10000	61	187		52000	7	0.8%	52
9	12	2.7%	12000	39	224		56000	3	0.3%	56
10	48	10.7%	14000	17	261		60000	6	0.7%	60
11	78	17.3%	16000	3	299		64000	7	0.8%	64
12	97	21.6%	18000	2	336		68000	-3	0.3%	68
13	88	19.6%	20000	1	3 <i>7</i> 3		72000	6	0.7%	72
14	77	17.1%	22000	0	410		76000	3	0.3%	76
15	50	11.1%	24000	0	448		80000	. 4	0.4%	80
TOTAL	450		26000	0	485		84000	2	0.2%	84
			>28000	0	0		>84000	38	4.1%	>84
			TOTAL	1425			TOTAL	916		
НР	ne.	908	,	^ATC1	916					
nr MP		563		GATE1 GATE2	450					
MP		203	,	an I E Z	430					

REC CODE EXPLANATION

2-SEC COUNT PERIODS

DISE





SORTER 2	31-0ct-92			
AVERAGE BACKGROUN	D COUNT RATE	0.83 ± 0.	.04 c/sec	
SORTER SOIL DENSI		1.15 tons/m <sup>3</sup>		
GROUND SOIL DENSI		1.65 tons/m³		
			CONTAMINATED	CLEAN
MASS TOTAL			1.52 tons	74.1 tons
MAXIMUM/SC	RT		53.6 kg	53.6 kg
MINIMUM/SC	PRT		0.7 kg	44.2 kg
UEIGHT RECOVERY O	R VOLUME RECOVERY			98.0%
EQUIVALENT SOIL-			1.21 yd³	58.7 yd³ 59.9 yd³/
PARTICIE ACTIVITY	(MAXIMUM ESTIMATE)			
TOTAL	(100.01.01.		19,209 kBq	
MAXIMUM/SC	ORT		672 kBq	•
MINIMUM/SC			2.4 kBq	
DICREBEEN + DARTI	CLE (REALISTIC ESTIMATE)	ACTIVITY	8,478 kBq	6,514 kBq
MAXIMUM/SO		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	499 kBq	19 kBq
MINIMUM/SC			0 Bq	-11 kBq
SPECIFIC A			5,563 Bq/kg	88 Bq/kg
HORK DAY				
WORK DAY	TART 07:00	) AM		
PROCESSING				
PLANT STAR	,		0.83 hr	
PROCESSING		2 PM		
WORK DAY E	AF 74	) PM		
PLANT SHUT			0.80 hr	
LUNCH PERI	00		0.5 hr	
WORK HOURS			10.0 hr	
	S HOURS (END-START)		8.88 hr	
	CESS HOURS (TOTAL 20-SEC	SORT PERIODS)	7.84 hr	
	EM PAUSE TIME		0.00 hr	
TOTAL DOWN	TIME (MAX-ACTUAL)		1.04 hr	
TIME UTILI	ZATION (ACTUAL HRS/WORK	HRS)	78.3%	
TOTAL SOIL PROCES	SING RECORDS (2-SEC and	20-SEC)	2,272	
	S (Test, calibration, et		14	
20-SEC PRO	CESS RECORDS		1,411	
	OTAL SORT		6 MD>0 & MND=0	)
	O SORT		684 AD=0 & MD=0	& MND>0
	OME SORT		719 AD>0&0 <hd<hi< td=""><td>NDmax&amp;MND</td></hd<hi<>	NDmax&MND
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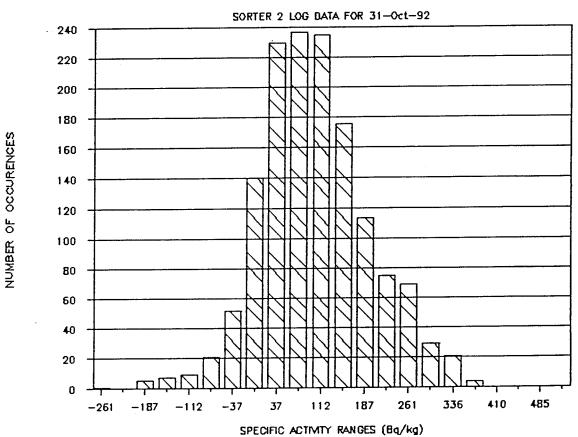
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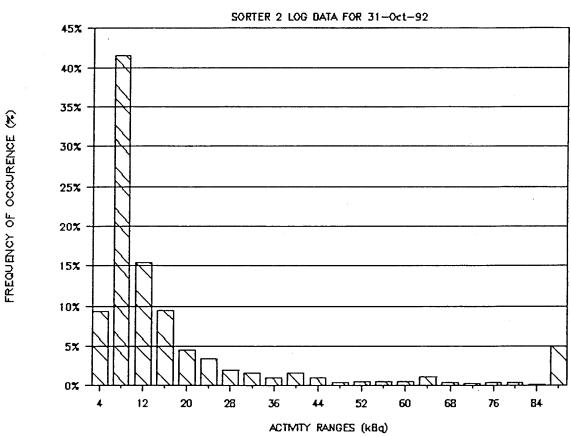
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1

2	-SEC CO	UNT PERIODS			-	14,110				
		2-SEC RECORD	S WITH S	SORTS			AP>0			
		2-SEC RECORD			IN >1 D	ETECTOR				
			DETECTO		193		75.1%			
			DETECTO		45		17.5%			
			DETECTO		12		4.7%			
			DETECTO		5		1.9%			
		6	DETECTO	RS	2		0.8%			
		7	DETECTO	ORS	0		0.0%			
		8	DETECTO	RS	0		0.0%			
		ī	OTAL			257				
		NET 2-SEC RE	CORDS WI	TH SORTS		604				
		2-SEC PERIOD	S WITH N	O SORTS		13,506				
		AVG TIME BET	WEEN 2-S	EC SORTS		46.7	sec	•		
1-GATE S	ODTO	439	ACT_ND	MIMRED	SPEC A		ACT_P	SORT	FREQ%	ACT_P
DETECTO	SORTS	FREQ%	(Bq)		(Bq/kg)		ACI_r (Bq)	(#)	IKLUA	(kBq)
DETECTO	30113	( NE 4 A	(54)	(")	(bd) kg)		(54)	\ <i>y</i>		(NOQ)
1	21	4.8%	-14000	1	-261		4000	80	9.3%	4
2	52	11.8%	-12000	0	-224		8000	358	41.6%	8
3	89	20.3%	-10000	5	-187		12000	133	15.4%	12
4	92	21.0%	-8000	7	-149		16000	82	9.5%	16
5	85	19.4%	-6000	9	-112		20000	39	4.5%	20
6	61	13.9%	-4000	21	-75		24000	29	3.4%	24
7	33	7.5%	-2000	52	-37		28000	17	2.0%	28
8	6	1.4%	0	140	0		32000	14	1.6%	32
TOTAL	439		2000	230	37		36000	- 8	0.9%	36
			4000	237	75		40000	14	1.6%	40
2-GATE SO	ORTS	422	6000	235	112		44000	8	0.9%	44
DETECTO	SORTS	FREQ%	8000	176	149		48000	3	0.3%	48
8			10000	114	187		52000	4	0.5%	52
9	44	10.4%	12000	75	224		56000	4	0.5%	56
10	55	13.0%	14000	69	261		60000	4	0.5%	60
11	97	23.0%	16000	29	299		64000	9	1.0%	64
12	90	21.3%	18000	21	336		68000	3	0.3%	68
13	76	18.0%	20000	4	373		72000	2	0.2%	72
14	50	11.8%	22000	0	410		76000	3	0.3%	76
15	10	2.4%	24000	0	448		80000	3	0.3%	80
TOTAL	422		26000	0	485		84000	1	0.1%	84
			>28000	0	0		>84000	43	5.0%	>84
			TOTAL	1425			TOTAL	861		
HF	PΕ	859	(	GATE1	861					
MP	Έ	956		GATE2	422					
DI	SE	460								

REC CODE EXPLANATION





SORTER 1 30-0	ct- <b>9</b> 2								
SURTER 1 30 0.		-							
AVERAGE BACKGROUND CO	JNT RATE	0.79	_	0.02	c/sec				
SORTER SOIL DENSITY			tons/						
GROUND SOIL DENSITY		1.65	tons/r				CLEA	.1	
					CONTAM			tons	
MASS TOTAL					53.6	tons		s kg	
MAXIMUM/SORT					0.7	•		9 kg	
MINIMUM/SORT					0.7	ky	40.	, va	
WEIGHT RECOVERY OR VO	LUME RECOVERY								98.8%
EQUIVALENT SOIL-IN-GRO					0.73	Aq <sub>3</sub>	59.6	5 yd³	60.3 yd³/day
PARTICLE ACTIVITY (MA	YIMUM ESTIMATE)								
TOTAL					15,324	kBq			
MAXIMUM/SORT					613	kBq			
MINIMUM/SORT					3.1	kBq			
DARTICLE	COTALISTIC ESTIMATES ACTI	VITY			5,324	kBa	1,05	2 kBq	
	(REALISTIC ESTIMATE) ACTI	****			•	kBq		B kBq	
MAXIMUM/SORT						Bq .	-13	3 kBq	
MINIMUM/SORT SPECIFIC ACTIV	ITY				5,785	Bq/kg	14	4 Bq/kg	
WORK DAY									
WORK DAY START	07:00 AM								
PROCESSING STAI						0.88 h	_		
PLANT STARTUP						U.00 II	r		
PROCESSING END	04:51 PM								
WORK DAY END	05:30 PM					0.65 h	r		
PLANT SHUTDOWN	TIME					0.05 11	,		
LUNCH PERIOD						0.5 h			
WORK HOURS						10.0 h			
MAX PROCESS HO						8.98 h			
ACTUAL PROCESS	HOURS (TOTAL 20-SEC SORT	PERIO	DS)			7.89 h			
TOTAL SYSTEM PA						0.00 h			
TOTAL DOWNTIME						1.09 h	Г		
TIME UTILIZATIO	ON (ACTUAL HRS/WORK HRS)					78.8%			
TOTAL SOIL PROCESSING	RECORDS (2-SEC and 20-SE	C)			2,117				
NONPROCESS RECORDS (Te					17				
20-SEC PROCESS	RECORDS				1,420				
TOTAL						MD>0 & MN	D=0		
NO SOF					976	AD=0 & MD	=0 & MND>0		
SOME S					440	AD>0&0 <md< td=""><td><mndmax&mnd<< td=""><td>4NDmax</td><td></td></mndmax&mnd<<></td></md<>	<mndmax&mnd<< td=""><td>4NDmax</td><td></td></mndmax&mnd<<>	4NDmax	
	AINED RECORDS				0				
	1kBq & MD>0 2								

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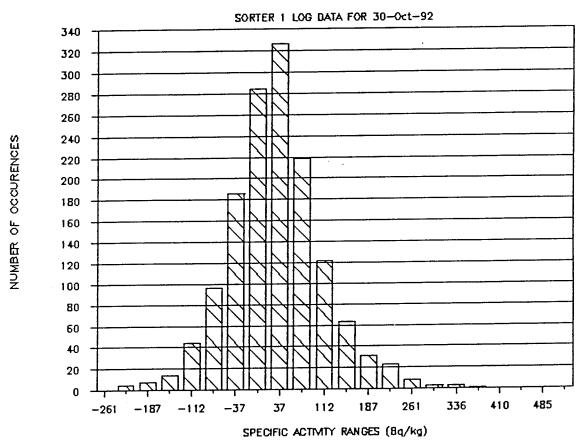
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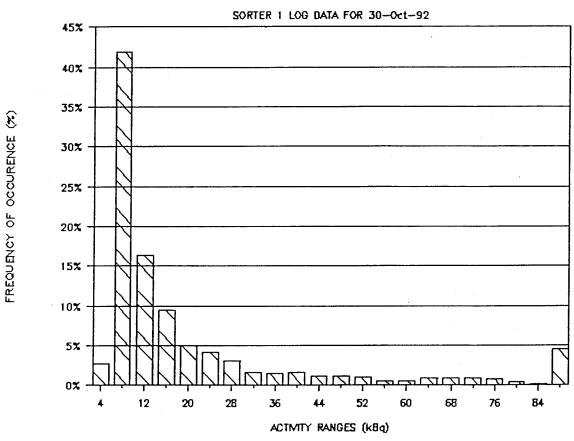
14,200

2	-250 00	UNI PEKIUUS				14,200			
		2-SEC RECORD	S WITH S	SORTS		697 AP>0			
		2-SEC RECORD	S WITH F	POSITIVES	IN >1 DE	TECTOR			
		2	DETECTO	ORS	163	78.7%			
	•	3	DETECTO	ORS	35	16.9%			
		4	DETECTO	RS	7	3.4%			
		5	DETECTO	ORS	2	1.0%			
		6	DETECTO	ORS	0	0.0%			
		7	DETECTO	JRS .	0	0.0%			
		8	DETECTO	ORS	0	0.0%			
		T	OTAL			207			
		NET 2-SEC RE	CORDS WI	TH SORTS		490			
		2-SEC PERIOD	S WITH N	IO SORTS		13,710			
		AVG TIME BET	WEEN 2-S	EC SORTS		58.0 sec			•
1-GATE SC		354	ACT_ND		SPEC_A		_	FREQ%	ACT_P
DETECTO	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)	(	Bq) (#)		(kBq)
1	9	2.5%	-14000	0	-261	4	000 19	2.7%	4
2	18		-12000	5			000 292		8
3	44	12.4%	-10000	7	- 187		000 114	16.4%	12
4	57		-8000	14	-149		000 66	9.5%	16
5	55	15.5%	-6000	44	-112		000 35	5.0%	20
6	80	22.6%	-4000	96	-75		000 29		24
7	72	20.3%	-2000	186	-37		000 21	3.0%	28
8	19	5.4%	0	285	0		000 11	1.6%	32
TOTAL	354		2000	327	37		000 10	1.4%	36
			4000	219	75		000 11	1.6%	40
2-GATE SC	RTS	343	6000	122	112		000 8	1.1%	44
DETECTO	SORTS	FREQ%	8000	63	149		000 8	1.1%	48
8			10000	31	187		000 7	1.0%	52
9	13	3.8%	12000	23	224		000 4	0.6%	56
10	33	9.6%	14000	8	261	60	000 4	0.6%	60
11	64	18.7%	16000	3	299		000 6	0.9%	64
12	54	15.7%	18000	3	336		000 6	0.9%	68
13	57	16.6%	20000	1	373		000 6	0.9%	72
14	75	21.9%	22000	0	410		000 5	0.7%	76
15	47	13.7%	24000	0	448		000 3	0.4%	80
TOTAL	343		26000	0	485		000 1	0.1%	84
			>28000	0	0	>840		4.4%	>84
			TOTAL	1437	•		TAL 697		
HP	Ε	679	(	GATE1	697				
MP	Ε	391		GATE2	343				
DI	SE	304							

REC CODE EXPLANATION

2-SEC COUNT PERIODS





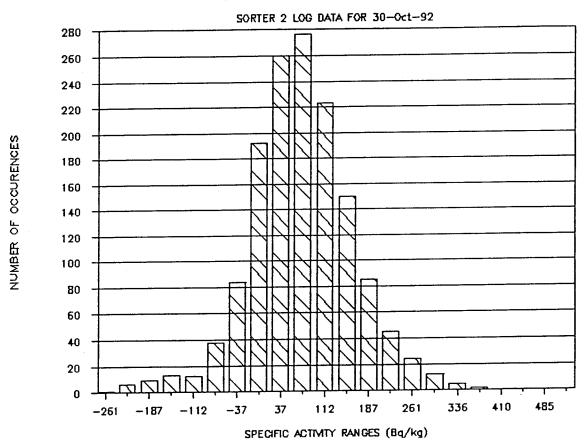
SORTER 2 30-Oct-92	-		
AVERAGE BACKGROUND COUNT RATE	0.80 ± 0	.03 c/sec	
SORTER SOIL DENSITY	1.15 tons/m³		
GROUND SOIL DENSITY	1.65 tons/m <sup>3</sup>		
drooms dole selective		CONTAMINATED	CLEAN
MASS TOTAL		0.87 tons	75.2 tons
MAXIMUM/SORT		53.6 kg	53.6 kg
MINIMUM/SORT		0.7 kg	46.2 kg
			98.9%
WEIGHT RECOVERY OR VOLUME RECOVERY		0.69 yd³	59.6 yd3 60.3 yd3/day
EQUIVALENT SOIL-IN-GROUND		0.07 ya	3,.0 ,0 0012 ,2 ,22,
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	:)		
TOTAL		10,139 kBq	
MAXIMUM/SORT	•	264 kBq	
MINIMUM/SORT		2.8 kBq	
	4	/ 544 10-	/ 21/ kpa
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTIVITY	4,511 kBq	4,214 kBq
MAXIMUM/SORT		178 kBq	19 kBq -14 kBq
MINIMUM/SORT		0 Bq	56 Bq/kg
SPECIFIC ACTIVITY		5,195 Bq/kg	JO BQ/Kg
WORK DAY			
WORK DAY START	07:00 AM		
PROCESSING START	07:52 AM		
PLANT STARTUP TIME		0.88 hr	
PROCESSING END	04:52 PM		
WORK DAY END	05:30 PM		
PLANT SHUTDOWN TIME		0.63 hr	
LUNCH PERIOD		0.5 hr	
WORK HOURS		10.0 hr	
MAX PROCESS HOURS (END-START	,	9.00 hr	
ACTUAL PROCESS HOURS (TOTAL		7.89 hr	
TOTAL SYSTEM PAUSE TIME		0.00 hr	
TOTAL DOWNTIME (MAX-ACTUAL)		1.11 hr	
TIME UTILIZATION (ACTUAL HRS	/WORK HRS)	78.8%	
TOTAL SOIL PROCESSING RECORDS (2-SE	C and 20-55C)	2,019	
		18	
NONPROCESS RECORDS (Test, calibrati	on, etc)	10	
20-SEC PROCESS RECORDS		1,420	
TOTAL SORT		2 MD>0 & MND=0	
NO SORT		878 AD=0 & MD=0	
SOME SORT		540 AD>0&0 <md<mn< td=""><td>Dmax&amp;MND<mndmax< td=""></mndmax<></td></md<mn<>	Dmax&MND <mndmax< td=""></mndmax<>
UNEXPLAINED RECORDS		0	
0 <ad<1kbq &="" md="">0</ad<1kbq>	2		
AD=0 & M			
AD<0 & M	D 0		

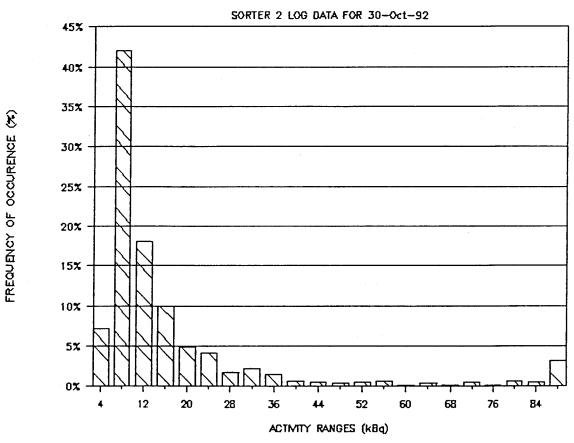
14,200

	JLC CO	ONI I ENIGO				,				
		2-SEC RECORD	S WITH S	ORTS		599	AP>0			
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 D	ETECTOR				
		2	DETECTO	RS	136		85.5%			
		3	DETECTO	RS	21		13.2%			
		4	DETECTO	RS	2		1.3%			
		5	DETECTO	RS	0		0.0%			
		6	DETECTO	RS	0		0.0%			
		7	DETECTO	RS	0		0.0%			
		8	DETECTO	RS	0		0.0%			
		1	OTAL			159				
		NET 2-SEC RE	CORDS WI	TH SORTS		440				
		2-SEC PERIOD	S WITH N	O SORTS		13,760				
		AVG TIME BET	WEEN 2-S	EC SORTS		64.5	sec			
1-GATE SO	ORTS	298	ACT_ND	NUMBER	SPEC_A		ACT_P	SORT	FREQ%	ACT_P
DETECTO	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(Bq)	(#)		(kBq)
1	14	4.7%	-14000	1			4000	43		4
2	38	12.8%	-12000	6			8000		42.1%	8
3	. 53	17.8%	-10000	9	-187		12000	108		12
4	52	17.4%	-8000	13	-149		16000	60	10.0%	16
5	44	14.8%	-6000	12	-112		20000	29	4.8%	20
6	54	18.1%	-4000	38	-75		24000	25	4.2%	24
7	34	11.4%	-2000	84	-37		28000	10	1.7%	28
8	9	3.0%	0	192	0		32000	13	2.2%	32
TOTAL	298		2000	260	37		36000	9	1.5%	36
			4000	277	75		40000	4	0.7%	40
2-GATE SC	ORTS	301	6000	223	112		44000	3	0.5%	44
DETECTO	SORTS	FREQ%	8000	150	149		48000	2	0.3%	48
8			10000	85	187		52000	3	0.5%	52
9	29	9.6%	12000	45	224		56000	4	0.7%	56
10	44	14.6%	14000	24	261		60000	1	0.2%	60
11	54	17.9%	16000	12	299		64000	2	0.3%	64
12	57	18.9%	18000	5	336		68000	1	0.2%	68
13	62	20.6%	20000	2	373		72000	3	0.5%	72
14	41	13.6%	22000	0	410		76000	1	0.2%	76
15	14	4.7%	24000	0	448		80000	4	0.7%	80
TOTAL	301		26000	0	485		84000	3	0.5%	84
			>28000	0	0		>84000	19	3.2%	>84
			TOTAL	1438			TOTAL	599		
HP	E	607	(	GATE1	599					
MP	PΕ	548	(	GATE2	301					
DI	SE	141								•

REC CODE EXPLANATION

2-SEC COUNT PERIODS



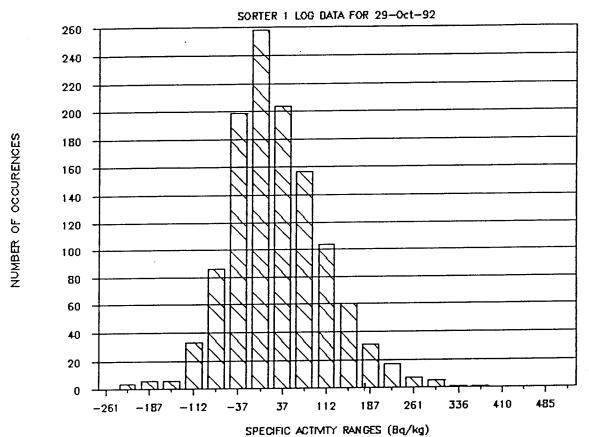


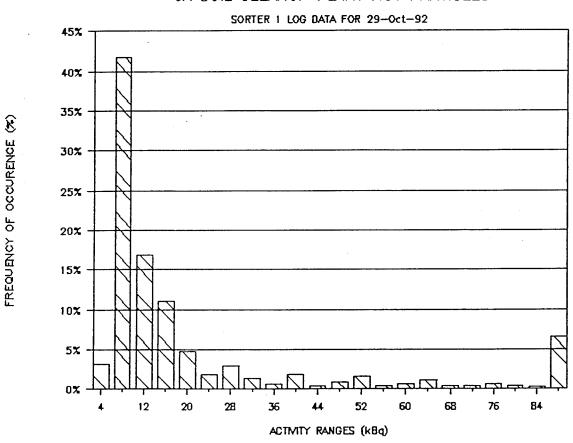
SORTER 1 29-Oct-92			
	0.78 ±	0.04 c/sec	
AVERAGE BACKGROUND COUNT RATE	1.15 tons/m³		
SORTER SOIL DENSITY	1.65 tons/m <sup>3</sup>		
GROUND SOIL DENSITY	1.03 (015/111	CONTAMINATED	CLEAN
		0.66 tons	61.3 tons
MASS TOTAL		53.6 kg	53.6 kg
MAXIMUM/SORT		0.7 kg	48.2 kg
MINIMUM/SORT		•••• Mg	·
WEIGHT RECOVERY OR VOLUME RECOVERY			98.9%
EQUIVALENT SOIL-IN-GROUND		0.52 yd³	48.6 yd <sup>3</sup> 49.1 yd <sup>3</sup> /day
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	E)		
TOTAL		10,490 kBq	•
MAXIMUM/SORT		355 kBq	·
MINIMUM/SORT		3.1 kBq	
	TIMATES ACTIVITY	3,656 kBq	773 kBq
DISPERSED + PARTICLE (REALISTIC ES	IIMA(E) ACITATII	203 kBq	19 kBq
MAXIMUM/SORT		0 Bq	-10 kBq
MINIMUM/SORT		5,545 Bq/kg	13 Bq/kg
SPECIFIC ACTIVITY			• -
WORK DAY			
WORK DAY START	07:00 AM		
PROCESSING START	09:15 AM	2 2/ 1-	
PLANT STARTUP TIME		2.26 hr	
PROCESSING END	04:42 PM		
WORK DAY END	05:30 PM	0.80 hr	
PLANT SHUTDOWN TIME		0.80 111	
LUNCH PERIOD		0.5 hr	
WORK HOURS		10.0 hr	
MAX PROCESS HOURS (END-STAR		7.44 hr	
ACTUAL PROCESS HOURS (TOTAL	20-SEC SORT PERIODS)	6.42 hr	
TOTAL SYSTEM PAUSE TIME		0.00 hr	
TOTAL DOWNTIME (MAX-ACTUAL)		1.02 hr	
TIME UTILIZATION (ACTUAL HR	S/WORK HRS)	64.2%	
TOTAL SOIL PROCESSING RECORDS (2-S	EC and 20-SEC)	1,601	
NONPROCESS RECORDS (Test, calibrat		23	
		1,156	
20-SEC PROCESS RECORDS		4 MD>0 & MND=0	n
TOTAL SORT		848 AD=0 & MD=0	
NO SORT			NDmax&MND <mndmax< td=""></mndmax<>
SOME SORT	c	0	
UNEXPLAINED RECORD		•	
0 <ad<1kbq &="" md="">0</ad<1kbq>	0 MD 0		
AD=0 &			
AD<0 &	FU V		

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2	-SEC CO	UNT PERIODS			-	11,560				
		2-SEC RECORD	S WITH S	ORTS			AP>0			
		2-SEC RECORD			IN >1 D		-			
			DETECTO		107		78.7%			
			DETECTO		25		18.4%			
			DETECTO		4		2.9%			
			DETECTO		0		0.0%			
			DETECTO		0		0.0%			
			DETECTO		0		0.0%			
		8	DETECTO	RS	0		0.0%			
		1	OTAL			136				
		NET 2-SEC RE	CUBUS III	TH SORTS		309				
		2-SEC PERIOD				11,251				
		AVG TIME BET				74.8	sec			
		Ard Time be	ween 2 o	co comic						
1-GATE S	ORTS	229	ACT_ND	NUMBER	SPEC_A		ACT P	SORT	FREQ%	ACT_P
DETECTO	SORTS		(Bq)		(Bq/kg)		(Bq)	(#)		(kBq)
			·		-					
1	5	2.2%	-14000	0	-261		4000	14	3.1%	4
2	21	9.2%	-12000	4	-224		8000	186	41.8%	8
3	44	19.2%	-10000	6	-187		12000	75	16.9%	12
4	36	15.7%	-8000	6	-149		16000	49	11.0%	16
5	50	21.8%	-6000	33	-112		20000	21	4.7%	20
6	32	14.0%	-4000	<b>8</b> 6	-75		24000	8	1.8%	24
7	26	11.4%	-2000	199	-37		28000	13	2.9%	28
8	15	6.6%	0	258	0		32000	6	1.3%	32
TOTAL	229		2000	204	37		36000	3		36
			4000	157	75		40000	8	1.8%	40
2-GATE S		216	6000	104	112		44000	2		44
DETECTO	SORTS	FREQ%	8000	60	149		48000	4	0.9%	48
8	_		10000	31	187		52000	7		52
9	9	4.2%	12000	17	224		56000	2		56
10	38	17.6%	14000	7	261		60000	3	0.7%	60
11	46	21.3%	16000	5	299		64000	5	1.1%	64
12	40	18.5%	18000	1	336		68000	2	0.4%	68
13	40		20000	1	373		72000	2		72
14	26	12.0%	22000	0	410		76000	3		76
15	17	7.9%	24000	0	448		80000	2		80
TOTAL	216		26000	0	485		84000 >84000		0.2%	84 >84
			>28000	0	0			29	6.5%	>04
			TOTAL	1179			TOTAL	445		
HF	PΕ	435	C	ATE1	445					
MF		244	C	ATE2	216					
DI	SE	307								

REC CODE EXPLANATION





SORTER 2 29-Oct-92	-							
AVERAGE BACKGROUND COUNT RATE	0	.80 ±	0.01	c/sec				
SORTER SOIL DENSITY	1	.15 tons	/m³					
GROUND SOIL DENSITY	1	.65 tons	/m³					
GROUND TO THE				CONTAM	INATED	CLEAN		
MASS TOTAL				0.63	tons	49.0	tons	
MAXIMUM/SORT				53.6	kg	53.6	-	
MINIMUM/SORT				0.7	kg	44.9	kg	
WEIGHT RECOVERY OR VOLUME RECO	OVERY							98.7%
EQUIVALENT SOIL-IN-GROUND				0.50	Aq <sub>3</sub>	38.8	Aq,	39.3 yd³/day
PARTICLE ACTIVITY (MAXIMUM EST	IMATE)							
TOTAL				5,158	kBq			
MAXIMUM/SORT				408	kBq			
MINIMUM/SORT				2.8	kBq			
DISPERSED + PARTICLE (REALISTI	C ESTIMATE) ACTIVIT	Y		2,322	kBq	2,211	kBq	
MAXIMUM/SORT	COLLINITY WATER			246	kBq	18	kBq	
MINIMUM/SORT				0	Bq	-14	kBq	
SPECIFIC ACTIVITY				3,713	Bq/kg	45	Bq/kg	
WORK DAY	07:00 AM							
WORK DAY START	10:35 AM							
PROCESSING START PLANT STARTUP TIME	10.33 741				3.59 hr			
PROCESSING END	04:46 PM							
WORK DAY END	05:30 PM							
PLANT SHUTDOWN TIME	03.30				0.74 hr			
					0.5 hr			
LUNCH PERIOD					10.0 hr			
WORK HOURS	CTARTA				6.18 hr			
MAX PROCESS HOURS (END- ACTUAL PROCESS HOURS (1		(20019			5.14 hr			
		K10037			0.00 hr			
TOTAL SYSTEM PAUSE TIME TOTAL DOWNTIME (MAX-ACT					1.04 hr			
TIME UTILIZATION (ACTUA					51.4%			
				1,202				
TOTAL SOIL PROCESSING RECORDS NONPROCESS RECORDS (Test, cali				34				
20 esc process Beronns				926				
20-SEC PROCESS RECORDS					MD>0 & MND=0	)		
TOTAL SORT					AD=0 & MD=0			
NO SORT					AD>0&0⊲4D⊲M		NDmax	
SOME SORT	roppe			0				
UNEXPLAINED RE								

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0<AD<1k8q & MD>0

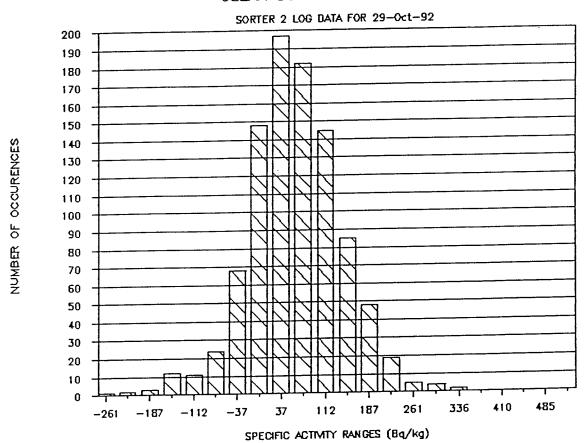
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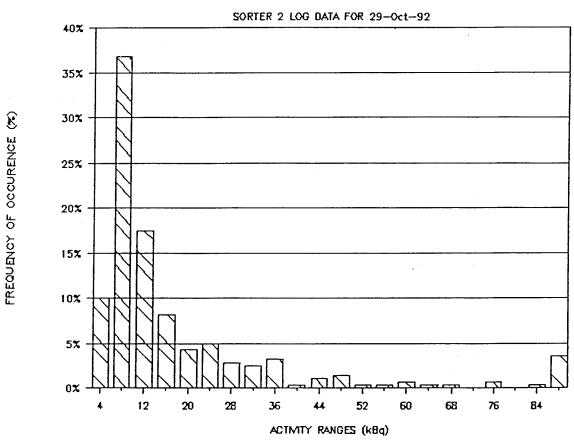
AD<0 & MD

0

2-SEC COUNT PERIODS						9,260				
		2-SEC RECORD	S WITH S	ORTS		276	AP>0			
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR				
		2	DETECTO	RS	60		77.9%			
		3 DETECTORS					18.2%			
		4	DETECTO	RS	3		3.9%			
		5	DETECTO	RS	0		0.0%			
		6	DETECTO	RS	0		0.0%			
		7	DETECTO	RS	0		0.0%			
		8	DETECTO	RS	0		0.0%			
		ī	OTAL			77				
		NET 2-SEC RE				199				
		2-SEC PERIOD				9,061				
		AVG TIME BET	WEEN 2-S	EC SORTS		93.1	sec			
1-GATE SO	ORTS	148	ACT ND	NUMBER	SPEC_A		ACT_P	SORT	FREQ%	ACT_P
DETECTO	SORTS	FREQ%	(Bq)		(Bq/kg)		(Bq)	(#)		(kBq)
1	6	4.0%	-14000	1	-261		4000	28	10.0%	4
2	22	14.6%	-12000	2	-224		8000	103	36.8%	8
3	26	17.2%	-10000	3	-187		12000	49	17.5%	12
4	24	15.9%	-8000	12	-149		16000	23	8.2%	16
5	26	17.2%	-6000	11	-112		20000	12	4.3%	20
6	25	16.6%	-4000	24	-75		24000	14	5.0%	24
7	19	12.6%	-2000	68	-37		28000	8	2.9%	28
8	3	2.0%	0	148	0		32000	7		32
TOTAL	151		2000	197	37		36000	9		36
			4000	182	75		40000	1		40
2-GATE SC	ORTS	128	6000	145	112		44000	3	1.1%	44
DETECTO	SORTS	FREQ%	8000	85	149		48000	4	1.4%	48
8			10000	48	187		52000	1	0.4%	52
9	11	8.5%	12000	19	224		56000	1	0.4%	56
10	20	15.5%	14000	5	261		60000	2	0.7%	60
11	27	20.9%	16000	4	299		64000	1	0.4%	64
12	19	14.7%	18000	2	336		68000	1	0.4%	68
13	22	17.1%	20000	0	373		72000	0	0.0%	72
14	20	15.5%	22000	0	410		76000	2	0.7%	76
15	10	7.8%	24000	0	448		80000	0	0.0%	80
TOTAL	129		26000	0	485		84000	1	0.4%	84
			>28000	0	0		>84000	10	3.6%	>84
			TOTAL	956			TOTAL	280		
нр	PΕ	270	1	CATE1	276					
MP		<b>2</b> 82		GATE2	128					
	SE	380	`		.23					
٠.		200								

REC CODE EXPLANATION





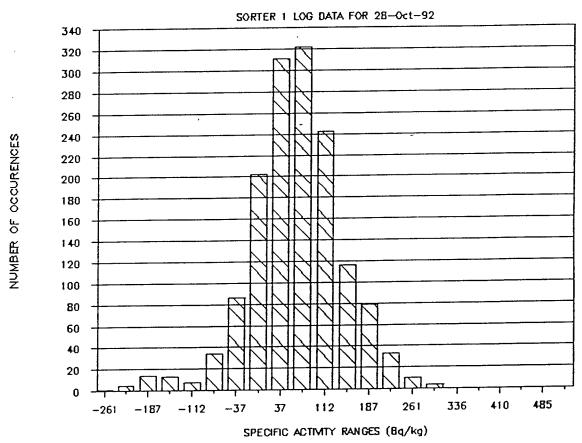
SORTER 1 28-Oct-92	-										
AVERAGE BACKGROUND COUNT RATE		0.78	±	0.04	c/sec						
SORTER SOIL DENSITY		1.15	tons/m	2 .							
GROUND SOIL DENSITY		1.65	tons/m	3							
						INATED		CLEAN			
MASS TOTAL						tons			tons		
MAXIMUM/SORT						' kg		53.6	-		
MINIMUM/SORT					0.7	kg		46.9	kg		
The second of the second	v									98.8%	
WEIGHT RECOVERY OR VOLUME RECOVER	.1				0.74	yd³		61.4	yd³	62.1 yds	/day
EQUIVALENT SOIL-IN-GROUND					•••	,-					
PARTICLE ACTIVITY (MAXIMUM ESTIMA	TE)										
TOTAL					21,254	kBq					
MAXIMUM/SORT					2,188						
MINIMUM/SORT					3.1	kBq					
								7 710	LD a		
DISPERSED + PARTICLE (REALISTIC E	STIMATE) ACTIVI	TY			7,198			3,712			
MAXIMUM/SORT						kBq			kBq		
MINIMUM/SORT						Bq			kBq		
SPECIFIC ACTIVITY					7,736	Bq/kg		40	Bq/kg		
WORK DAY	07.00 44										
WORK DAY START	07:00 AM										
PROCESSING START	07:47 AM					0.79	hr				
PLANT STARTUP TIME	05-00 04										
PROCESSING END	05:00 PM 05:30 PM										
WORK DAY END	03:30 PM					0.51	hr				
PLANT SHUTDOWN TIME											
LUNCH PER100						0.5	hr				
WORK HOURS						10.0	hr hr				
MAX PROCESS HOURS (END-ST/	RT)					9.21	hr				
ACTUAL PROCESS HOURS (TOTA		ER I OO	S)			8.13	hr				
TOTAL SYSTEM PAUSE TIME						0.00	hr hr				
TOTAL DOWNTIME (MAX-ACTUAL	)					1.08	hr h				
TIME UTILIZATION (ACTUAL I						81.2	2%				
VIII CONTRACTOR V											
TOTAL SOIL PROCESSING RECORDS (2-	SEC and 20-SEC)				2,392	?					
NONPROCESS RECORDS (Test, calibra					16	<b>,</b>					
					4 //7	,					
20-SEC PROCESS RECORDS					1,463		MND-0				
TOTAL SORT					_	\$ 0<0M (	MD=0 & MN	D>U			
NO SORT							MD=U & NN ⊄MD <mndmax< td=""><td></td><td>NUmax</td><td></td><td></td></mndmax<>		NUmax		
SOME SORT							-UN -UNDINGX	GUINO AL	uan		
UNEXPLAINED RECOF					C	,					
0 <ad<1kbq &="" md="">0</ad<1kbq>	2										
AD=0 8	MD 0										

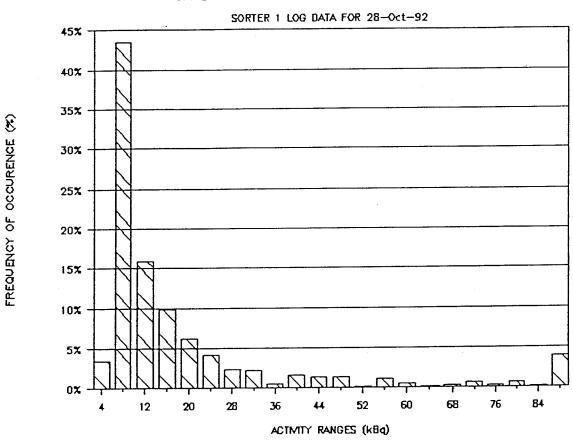
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0 4M & 0>dA

_	050 00	ממנותה הכתוחה			-	14,630				
2	-SEC CO	UNT PERIODS	C 117711 6	CODIC			AP>0			
		2-SEC RECORD 2-SEC RECORD			TH >1 DE		AI > 0			
					209	LIEGION	82.3%			
			DETECTO		37		14.6%			
			DETECTO		6		2.4%			
			DETECTO		2		0.8%			
			DETECTO		0		0.0%			
			DETECTO		0		0.0%			
			DETECTO		0		0.0%			
			OTAL	JK3	J	254				
		•	OTAL							
		NET 2-SEC RE	CORDS W	TH SORTS		675				
		2-SEC PERIOD	S WITH	O SORTS		13,955		•		
		AVG TIME BET	WEEN 2-S	SEC SORTS		43.3	sec			
1-GATE S	ORTS	470	ACT_ND	NUMBER	SPEC_A		ACT_P	SORT	FREQ%	ACT_P
DETECTO	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(pq)	(#)		(kBq)
1	21	4.5%	-14000	1	-261		4000	32	3.4%	4
2	. 50	10.6%	-12000	5	-224		8000	404	43.5%	8
3	78	16.6%	-10000	14	-187		12000	148	15.9%	12
4	79	16.8%	-8000	13	- 149		16000	91	9.8%	16
5	<b>88</b>	18.7%	-6000	7	-112		20000	58	6.2%	20
6	74	15.7%	-4000	34	- <i>7</i> 5		24000	38	4.1%	24
7	57		-2000	86	-37		28000	22	2.4%	28
8	23		0	202	0		32000	20	2.2%	32
TOTAL	470		2000	311	37		36000	5	0.5%	36
			4000	322	75		40000	15	1.6%	40
2-GATE S	ORTS	459	6000	243	112		44000	13	1.4%	44
DETECTO	SORTS	FREQ%	8000	116	149		48000	12	1.3%	48 53
8			10000	79	187		52000	1	0.1%	52
9	32	7.0%	12000	33	224		56000	10	1.1%	56
10	66	14.4%	14000	10	261		60000	5	0.5%	60
11	83	18.1%	16000	4	299		64000	1	0.1%	64
12	89	19.4%	18000	0	336		68000	2	0.2%	68
13	81		20000	0	373		72000	6		72
14	63		22000	0	410		76000	3	0.3%	76
15	45	9.8%	24000	0	448		80000	6	0.6%	80
TOTAL	459		26000	0	485		84000	1	0.1%	84
			>28000	0	0		>84000	36	3.9%	>84
			TOTAL	1480			TOTAL	929		
***	nc	017		CATE1	929					
	PE De	913		GATE1	450					
MF		477 0		GATE2	<b>ت</b> ری					•
וט	ISE	U								

REC CODE EXPLANATION





SORTER 2 28-Oct-92	-				
TARE THE COUNTY OF THE COUNTY	0.75	2 ± 0.03 c/sec			
AVERAGE BACKGROUND COUNT RATE		tons/m³			
SORTER SOIL DENSITY		tons/m³			
GROUND SOIL DENSITY	1.0.	CONTAM	INATED	CLEAN	
		0.93	tons	76.6 tons	
MASS TOTAL		53.6	kg	53.6 kg	
MAXIMUM/SORT		0.7	kg	46.9 kg	
MINIMUM/SORT					
WEIGHT RECOVERY OR VOLUME RECOVE	RY				98.8%
EQUIVALENT SOIL-IN-GROUND		0.74	yd3	60.7 yd <sup>3</sup>	61.5 yd³/day
PARTICLE ACTIVITY (MAXIMUM ESTIM	ATE)				
TOTAL		13,573	kBq		
MAXIMUM/SORT		362	kBq		
MINIMUM/SORT		2.8	kBq		
DISPERSED + PARTICLE (REALISTIC	ESTIMATE) ACTIVITY	5,732	kBq	6,136 kBq	
MAXIMUM/SORT		240	kBq	17 kBq	
MINIMUM/SORT		0	Bq	-10 kBq	
SPECIFIC ACTIVITY		6,143	Bq/kg	80 Bq/kg	
WORK DAY	07-00 44				
WORK DAY START	07:00 AM				
PROCESSING START	07:47 AM		0.79 hr		
PLANT STARTUP TIME	0/-E/ DH		••••		
PROCESSING END	04:54 PM 05:30 PM				
WORK DAY END	03:30 FR		0.60 hr		
PLANT SHUTDOWN TIME					
LUNCH PERIOD			0.5 hr		
WORK HOURS			10.0 hr		
MAX PROCESS HOURS (END-ST	ART)		9.12 hr		
ACTUAL PROCESS HOURS (TOT		)OS)	8.04 hr		
TOTAL SYSTEM PAUSE TIME			0.02 hr		
TOTAL DOWNTIME (MAX-ACTUA	L)		1.08 hr		
TIME UTILIZATION (ACTUAL			80.3%		
TOTAL SOIL PROCESSING RECORDS (2	-SEC and 20-SEC)	2,223			
NONPROCESS RECORDS (Test, calibr		66			
70 050 000550 0500000		1,447			
20-SEC PROCESS RECORDS  TOTAL SORT			MD>0 & MND=0		
NO SORT		815	& 0=0M & 0=0A	MND>0	
SOME SORT		631	AD>0&0 <md<mndm< td=""><td>xsmCMM&gt;DMM&amp;xs</td><td></td></md<mndm<>	xsmCMM>DMM&xs	
UNEXPLAINED RECO	RDS	0			
0 <ad<1kbq &="" md="">0</ad<1kbq>	_				
AD=0					
AD-0	· · · · · · · · · · · · · · · · · ·				

AD<0 & MD

2.	-SEC CO	UNT PERIODS			•	14,470				
_		2-SEC RECORD	S WITH S	ORTS		776	AP>0			
		2-SEC RECORD			IN >1 DI	ETECTOR				
			DETECTO		205		83.7%			
			DETECTO		31		12.7%			
			DETECTO		8		3.3%			
		5	DETECTO	RS	1		0.4%			
		6	DETECTO	RS	0		0.0%			
		7	DETECTO	RS	0		0.0%			
		8	DETECTO	RS	0		0.0%			
		1	OTAL			245				
		NET 2-SEC RE	CORDS WI	TH SORTS		531				
		2-SEC PERIOD				13,939				
		AVG TIME BET				54.5	sec	·		
1-GATE SO	no T C	402	ACT_ND	NI IMRER	SPEC A		ACT_F	SORT	FREQ%	ACT_P
DETECTO	SORTS		(Bq)		(8q/kg)		 (Bq)			(kBq)
DETECTO	30013	INCAN	(04)	<b>\</b> ,	(-4)		•			
1	11	2.5%	-14000	0	-261		4000	44	5.4%	4
2	69		-12000	0	-224		8000	303	37.4%	8
3	63		-10000	2	-187		12000	146	18.0%	12
4	84	19.4%	-8000	7	-149		16000	77	9.5%	16
5	85		-6000	7	-112		20000	45	5.6%	20
6	72		-4000	12	-75		24000	42	5.2%	24
7	39		-2000	33	-37		28000	23	2.8%	28
8	10		0	144	0		32000	22	2.7%	32
TOTAL	433		2000	228	37		36000	15	1.9%	36
			4000	310	75		40000	14	1.7%	40
2-GATE SO	ORTS	374	6000	308	112		44000	11	1.4%	44
DETECTO	SORTS	FREQ%	8000	208	149		48000	) 6	0.7%	48
8			10000	123	187		52000	1 6	0.7%	52
9	22	5.8%	12000	53	224		56000	6	0.7%	56
10	50	13.3%	14000	35	261		60000	1	0.1%	60
11	79	21.0%	16000	7	299		64000	4	0.5%	64
12	92	24.4%	18000	2	336		68000	1	0.1%	68
13	67	17.8%	20000	0	373		72000	3	0.4%	72
14	52	13.8%	22000	0	410		76000	5	0.6%	76
15	15	4.0%	24000	0	448		80000	1	0.1%	80
TOTAL	377		26000	0	485		84000	2	0.2%	84
			>28000	0	0		>84000		4.1%	>84
			TOTAL	1479			TOTAL	810		
HF	PΕ	741	4	GATE1	776					
MF	PE	575		GATE2	374					

REC CODE EXPLANATION

76

DISE

SORTER 2 27-0ct-92	÷ .		
DACKCOOLIND COUNT PATE	0.79 ± 0	.03 c/sec	
AVERAGE BACKGROUND COUNT RATE	1.15 tons/m³		
SORTER SOIL DENSITY	1.65 tons/m³		
GROUND SOIL DENSITY		CONTAMINATED	CLEAN
TOTAL		0.64 tons	43.0 tons
MASS TOTAL  MAXIMUM/SORT		51.7 kg	53.6 kg
MINIMUM/SORT		0.7 kg	48.2 kg
HIRITON SON			
WEIGHT RECOVERY OR VOLUME RECOVERY			98.5%
EQUIVALENT SOIL-IN-GROUND		0.51 yd³	34.1 yd <sup>3</sup> 34.6 yd <sup>3</sup> /day
PARTICLE ACTIVITY (MAXIMUM ESTIMATE	; <b>)</b>	40 (07 10)	
TOTAL		10,483 kBq	
MAXIMUM/SORT		2,071 kBq	
MINIMUM/SORT		2.4 kBq	
		/ 122 kga	3,117 kBq
DISPERSED + PARTICLE (REALISTIC EST	IMATE) ACTIVITY	4,122 kBq 1369 kBq	15 kBq
MAXIMUM/SORT		0 Bq	-14 kBq
MINIMUM/SORT		6,463 Bq/kg	73 Bq/kg
SPECIFIC ACTIVITY		0,405 647 43	
HARV DAY			
WORK DAY WORK DAY START	07:00 AM		
PROCESSING START	09:35 AM		
PLANT STARTUP TIME		2.59 hr	
PROCESSING END	04:50 PM		
WORK DAY END	05:30 PM		
PLANT SHUTDOWN TIME		0.67 hr	
		0.5.4-	
LUNCH PER100		0.5 hr	
WORK HOURS		10.0 hr	
MAX PROCESS HOURS (END-STAR)	7)	7.25 hr	
ACTUAL PROCESS HOURS (TOTAL	20-SEC SORT PERIODS)	4.52 hr 0.35 hr	
TOTAL SYSTEM PAUSE TIME		2.73 hr	
TOTAL DOWNTIME (MAX-ACTUAL)		45.2%	
TIME UTILIZATION (ACTUAL HR	S/WORK HRS)	43.2%	
	on and 20-555)	1,185	
TOTAL SOIL PROCESSING RECORDS (2-SI		22	
NONPROCESS RECORDS (Test, calibrat	ion, etc)		
20-SEC PROCESS RECORDS		814	
TOTAL SORT		4 MD>0 & MND=0	
NO SORT		486 AD=0 & MD=0	
SOME SORT		328 AD>0&0 <md<mn< td=""><td>Dmax&amp;MND <mndmax< td=""></mndmax<></td></md<mn<>	Dmax&MND <mndmax< td=""></mndmax<>
UNEXPLAINED RECORDS	3	(4)	
U <ad<1kbq &="" md="">0</ad<1kbq>	1		
AD=0 & I	4D 0		
40.40 \$ 4	4D 0		

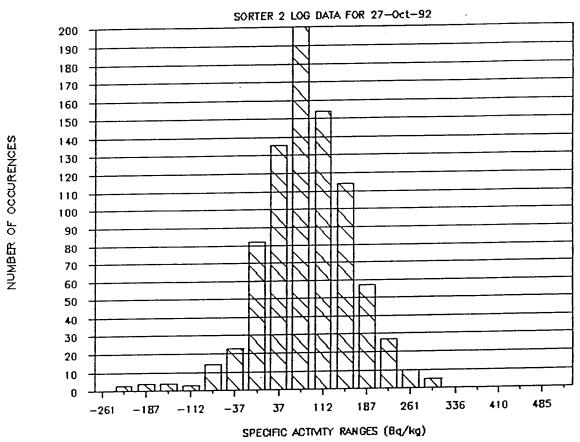
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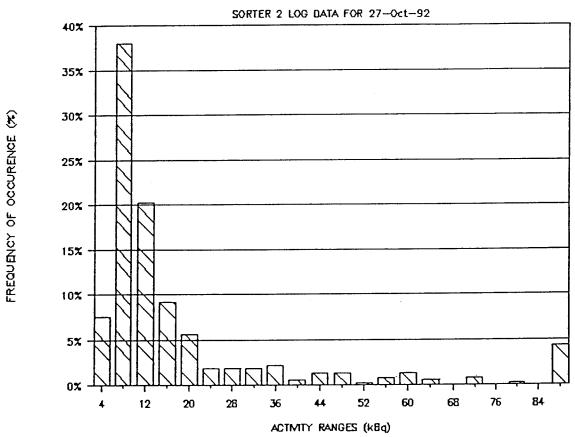
8,140

_	020	2-SEC RECORD	S HITH S	ORTS		371	AP>0			
		2-SEC RECORD			IN >1 DE					
			DETECTO		85		75.2%			
			DETECTO		20		17.7%			
			DETECTO		5		4.4%			
			DETECTO		2		1.8%			
			DETECTO		1		0.9%			•
			DETECTO		0		0.0%			
			DETECTO		0		0.0%			
			OTAL			113				
		·								
		NET 2-SEC RE	CORDS WI	TH SORTS		258				
		2-SEC PERÍOD	S WITH N	SORTS		7,882				
		AVG TIME BET	WEEN 2-SI	EC SORTS		63.1	sec			
1-GATE SO	ORTS	187	ACT_ND	NUMBER	SPEC_A		ACT_P		FREQ%	ACT_P
DETECTO	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(Bq)	(#)		(kBq)
	,	7 24	1/000	0	-261		4000	28	7.5%	4
1	6		-14000 -12000	3			8000	141	38.0%	8
2	20		-12000	4	-187		12000	75	20.2%	12
3	39 70		-8000	4	-149		16000	34	9.2%	16
4 5	38 34	18.2%	-6000	3			20000	21	5.7%	20
			-4000	14	-75		24000	7	1.9%	24
6 7	22 23	12.3%	-2000	23			28000	7	1.9%	28
8	<u>ت</u> 5	2.7%	0	82	0		32000	7	1.9%	32
TOTAL	187		2000	136			36000	8	2.2%	36
IOIAL	107		4000	200	75		40000	2	0.5%	40
2-GATE SO	2190	184	6000	154	112		44000	5	1.3%	44
DETECTO	SORTS	FREQ%	8000	114	149		48000	5	1.3%	48
8	Contro		10000	57			52000	1	0.3%	52
9	13	7.1%	12000	27			56000	3	0.8%	56
10	24	13.0%	14000	10	261		60000	5	1.3%	60
11	39	21.2%	16000	5	299		64000	2	0.5%	64
12	44	23.9%	18000	0	336		68000	0	0.0%	68
13	25	13.6%	20000	0	373		72000	3	0.8%	72
14	28	15.2%	22000	0	410		76000	0	0.0%	76
15	11	6.0%	24000	0	448		80000	1	0.3%	<b>8</b> 0
TOTAL	184		26000	0	485		84000	0	0.0%	84
			>28000	0	0		>84000	16	4.3%	>84
			TOTAL	836			TOTAL	371		
HF	Έ	364		GATE1	371					
MF		279	(	CATE2	184					•
DI	SE	308								

REC CODE EXPLANATION

2-SEC COUNT PERIODS

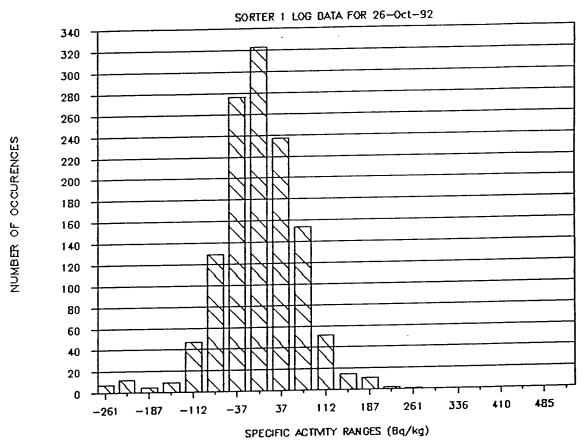


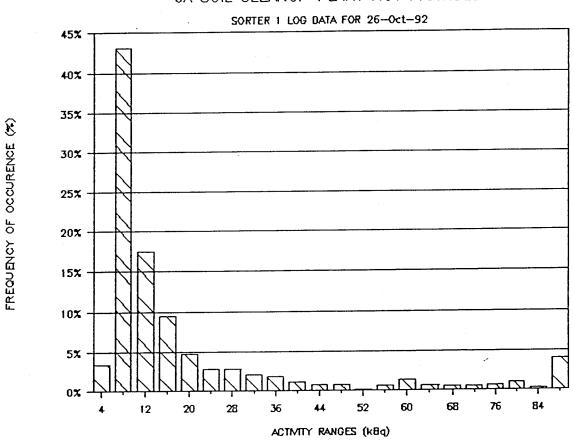


SORTER 1 26-Oct-92		-			
AVERAGE BACKGROUND COUNT RATE		0.79 ± 0	.03 c/sec		
SORTER SOIL DENSITY		1.15 tons/m <sup>3</sup>			
GROUND SOIL DENSITY		1.65 tons/m³			
GROOND SOIL DENOTE:			CONTAMINATED	CLEAN	
MASS TOTAL			0.63 tons	66.6 tons	
MAXIMUM/SORT			6.7 kg	53.6 kg	
MINIMUM/SORT			0.7 kg	46.9 kg	
DECOME DECOME	VCDV				99.1%
WEIGHT RECOVERY OR VOLUME RECO	VERT		0.50 yd3	52.8 yd³	53.3 yd³/day
EQUIVALENT SOIL-IN-GROUND			· · · · · · · · · · · · · · · · · · ·	·	
PARTICLE ACTIVITY (MAXIMUM EST	IMATĘ)				
TOTAL	-		12,312 kBq		-
MAXIMUM/SORT			569 kBq		
MINIMUM/SORT			2.6 kBq		
2.07.015 (054) 1071	C CCTIMATEL ACTI	VITY	4,332 kBq	(1,124)k8q	
DISPERSED + PARTICLE (REALISTIC	C ESTIMATE) ACTI	VIII	345 kBq	13 k8q	
MAXIMUM/SORT			0 Bq	-19 kBq	
MINIMUM/SORT			6,848 Bq/kg	(17)Bq/kg	
SPECIFIC ACTIVITY			0,010 04 13	•	
WORK DAY					
WORK DAY START	07:00 AM				
PROCESSING START	08:14 AM				
PLANT STARTUP TIME			1.25 h	r	
PROCESSING END	04:57 PM				
WORK DAY END	05:30 PM				
PLANT SHUTDOWN TIME			0.54 h	r	
LUNCH PERIOD			0.5 h	r	
WORK HOURS			10.0 h	r	
MAX PROCESS HOURS (END-	CTART		8.72 h	r	
ACTUAL PROCESS HOURS (TO		PERIODS)	6.97 h	Γ	
TOTAL SYSTEM PAUSE TIME	JIAC 20 SEC SONT		0.00 h	r	
	IAL N		1.75 h	r ·	
TOTAL DOWNTIME (MAX-ACTU TIME UTILIZATION (ACTUAL			69.7%		-
TIME UTILIZATION (ACTOM					
TOTAL SOIL PROCESSING RECORDS	(2-SEC and 20-SE	C)	1,870		
NONPROCESS RECORDS (Test, calib	oration, etc)		24		
20-SEC PROCESS RECORDS			1,255		
TOTAL SORT			0 MD>0 & MNI	D=0	
NO SORT			798 AD=0 & MD	=0 & MND>0	
SOME SORT			457 AD>0&0 <md< td=""><td>XEMDUM&gt; GUM3xemGUM&gt;</td><td></td></md<>	XEMDUM> GUM3xemGUM>	
UNEXPLAINED REC	CORDS		0		
0 <ad<1kbq &="" md=""></ad<1kbq>	_				
•	) & MD 0				
	) & MD 0				
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					

2	SEC CO	UNT PERIODS				12,550				
		2-SEC RECORD	S WITH S	SORTS		615	AP>0			
		2-SEC RECORD	S WITH F	OSITIVES	IN >1 DE	TECTOR				
		2	DETECTO	)RS	145		81.9%			
		3	DETECTO	RS	25		14.1%			
		4	DETECTO	)RS	7		4.0%			
		5	DETECTO	)RS	0		0.0%			
		6	DETECTO	RS	0		0.0%			
		7	DETECTO	)RS	0		0.0%			
		8	DETECTO	RS	0		0.0%			
		T	OTAL			177				
		NET 2-SEC RE	CORDS WI	TH SORTS		438				
		2-SEC PERIOD	S WITH A	IO SORTS		12,112			•	
		AVG TIME BET	WEEN 2-S	EC SORTS		57.3	sec			
										467.5
1-GATE S	ORTS	318	ACT_ND		SPEC_A		ACT_F		FREQ%	ACT_P
DETECTO	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(Bq)	(#)		(kBq)
	4-7	F 7W	1/000	7	-261		4000	21	3.4%	4
1	17	,	-14000	7	-224		8000			8
2	28		-12000	12 5	-187		12000			12
3	46		-10000	9	-149		16000			16
4	68		-8000		-112		20000			20
5	70		-6000	47	-112		24000			24
6	48		-4000	129 276	-75 -37		28000			28
7	29		-2000	323	0		32000			32
8	12		2000	237	37		36000			36
TOTAL	318		2000 4000	154	75		40000			40
2 6475 6	OTTO	297	6000	51	112		44000		0.8%	44
2-GATE S			8000	15	149		48000		0.8%	48
DETECTO 8	SORTS	FREQ%	10000	11	187		52000			52
9	29	9.8%	12000	2	224		56000		0.7%	56
10	34	11.4%	14000	1	261		60000			60
11	51	17.2%	16000	0	299		64000		0.7%	64
12	68	22.9%	18000	0	336		68000			68
13	60	20.2%	20000	0	373		72000			72
14	30	10.1%	22000	0	410		76000		0.7%	76
15	25	8.4%	24000	0	448		80000			80
TOTAL	297		26000	0	485		84000			84
TOTAL	٠,,		>28000	0	0		>84000		4.1%	>84
			TOTAL	1279			TOTAL			
				,						
н	PE	606		GATE1	615					
	PE	338		GATE2	297					
	ISE	0		_						
v		-								

REC CODE EXPLANATION





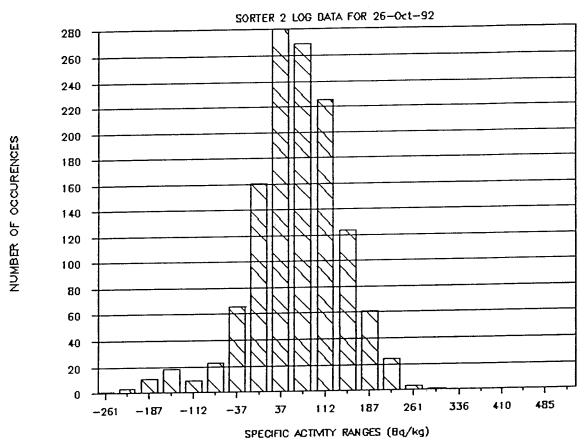
SORTER 2 26-Oct-92	-		
AVERAGE BACKGROUND COUNT RATE	0.79 ±	0.03 c/sec	
SORTER SOIL DENSITY	1.15 tons/m <sup>3</sup>		
GROUND SOIL DENSITY	1.65 tons/m³		
GROOMD SOLE DEMOTION		CONTAMINATED	CLEAN
MASS TOTAL		0.59 tons	67.0 tons
MAXIMUM/SORT		4.7 kg	53.6 kg
MINIMUM/SORT		0.7 kg	48.9 kg
WEIGHT RECOVERY OR VOLUME RECOVE	ERY		99.1%
EQUIVALENT SOIL-IN-GROUND		0.46 yd³	53.1 yd³ 53.6 yd³/day
PARTICLE ACTIVITY (MAXIMUM ESTIM	MATE)	1/. 380 kPa	
TOTAL		14,389 kBq	
MAXIMUM/SORT		2,291 kBq	
MINIMUM/SORT		2.8 kBq	
DISPERSED + PARTICLE (REALISTIC	ECTIMATEL ACTIVITY	5,605 kBq	3,188 kBq
	ESTIMATE ACTIVITY	1652 kBq	15 kBq
MAXIMUM/SORT		0 Bq	-15 kBq
MINIMUM/SORT		9,556 Bq/kg	48 Bq/kg
SPECIFIC ACTIVITY		• • •	
WORK DAY			
WORK DAY START	07:00 AM		
PROCESSING START	08:15 AM		
PLANT STARTUP TIME		1.25 hr	
PROCESSING END	04:57 PM		
WORK DAY END	05:30 PM		
PLANT SHUTDOWN TIME		0.54 hr	
		0.5 hr	
LUNCH PERIOD		10.0 hr	
WORK HOURS		8.71 hr	
MAX PROCESS HOURS (END-ST		7.01 hr	
ACTUAL PROCESS HOURS (TOT	TAL 20-SEC SORT PERIODS)		
TOTAL SYSTEM PAUSE TIME		0.00 hr	
TOTAL DOWNTIME (MAX-ACTUA		1.70 hr 70.1%	
TIME UTILIZATION (ACTUAL	HRS/WORK HRS)	70.1%	
TOTAL SOIL PROCESSING RECORDS (2	P-SEC and 20-SEC)	1,766	
NONPROCESS RECORDS (Test, calibr		15	
NON ROCESS RECORDS (1881) CELLO.			
20-SEC PROCESS RECORDS		1,262	
TOTAL SORT		0 MD>0 & MND=0	
NO SORT		810 AD=0 & MD=0	
SOME SORT		452 AD>080 <md<mn< td=""><td>Dmax&amp;MND<mndmax< td=""></mndmax<></td></md<mn<>	Dmax&MND <mndmax< td=""></mndmax<>
UNEXPLAINED RECO	PRDS	0	
O <ad<1kbq &="" md="">0</ad<1kbq>	1		
AD=0	0 MB &		
AD<0	8 MD 0		

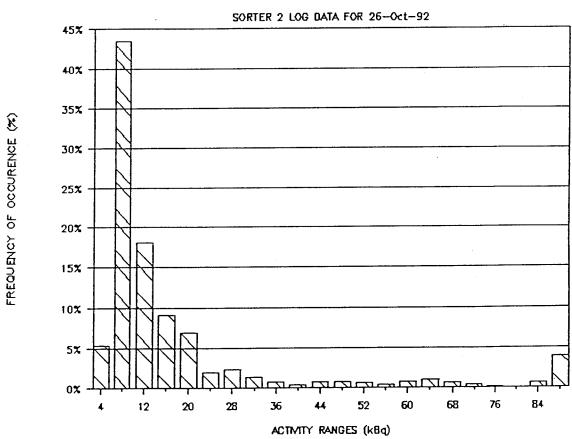
12,620

2-	2-SEC COUNT PERIODS					12,620				
		2-SEC RECORD					AP>0			
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR				
		2	DETECTO	RS	111		77.6%			
		3	DETECTO	RS	25		17.5%			
		4	DETECTO	RS	7		4.9%			
		5	DETECTO	RS	0		0.0%			
		6	DETECTO	RS	0		0.0%			
		7	DETECTO	RS	0		0.0%			
		8	DETECTO	RS	0		0.0%			
		T	OTAL			143				
		NET 2-SEC RE	CORDS WI	TH SORTS		361				
		2-SEC PERIOD	S WITH N	O SORTS		12,259				
		AVG TIME BET	WEEN 2-S	EC SORTS		69.9	sec			
1-GATE SC	ORTS	258	ACT_ND	NUMBER	SPEC_A		ACT	_p sort	FREQ%	ACT_P
DETECTO	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(B	q) (#)		(kBq)
1	7	2.7%	-14000	1	-261		40	00 27	5.4%	4
2	21	8.1%	-12000	3	-224		80	00 219	43.5%	8
3	39	15.1%	-10000	11	-187		120	00 91	18.1%	12
4	41	15.9%	-8000	18	-149		160	00 46	9.1%	16
5	64	24.8%	-6000	9	-112		200	00 35	6.9%	20
6	47	18.2%	-4000	23	-75		240	00 10	2.0%	24
7	34	13.2%	-2000	<b>6</b> 6	-37		280	00 12	2.4%	28
8	5	1.9%	0	161	0		320	00 7	1.4%	32
TOTAL	258		2000	280	37		360	00 4	0.8%	36
			4000	269	75		400	00 2	0.4%	40
2-GATE SC	ORTS	246	6000	225	112		440	00 4	0.8%	44
DETECTO	SORTS	FREQ%	8000	124	149		480	00 4	0.8%	48
8			10000	61	187		520			52
9	21	8.5%	12000	24	224		560	00 2	0.4%	56
10	23	9.3%	14000	3	261		600	00 4	0.8%	60
11	40	16.3%	16000	1	299		640	00 5	1.0%	64
12	60	24.4%	18000	0	336		680	00 3	0.6%	68
13	48	19.5%	20000	0	373		720	00 2	0.4%	72
14	44	17.9%	22000	0	410		760	00 1	0.2%	76
15	10	4.1%	24000	0	448		800	00 0	0.0%	80
TOTAL	246		26000	0	485		840	00 3		84
			>28000	0	0		>840			>84
			TOTAL	1279			TOT	AL 504	•	
HF	PE	499		GATE1	504					
MF	PE	376		GATE2	246					
DI	ISE	0								

REC CODE EXPLANATION

2-SEC COUNT PERIODS





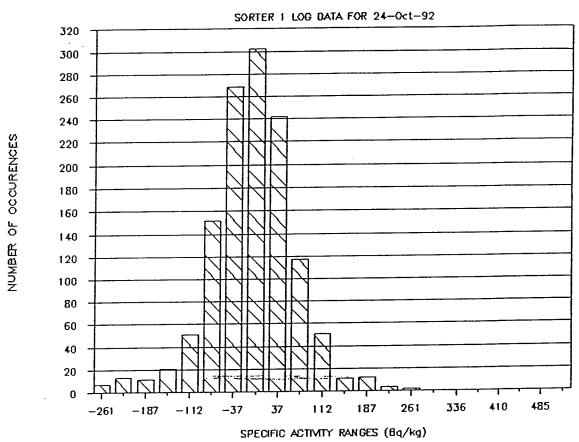
SORTER 1 24-Oct-92	·		
AVERAGE BACKGROUND COUNT RATE	0.77 ±	0.05 c/sec	
SORTER SOIL DENSITY	1./5 _ERR tons/m	, Kem 10/24/92	
GROUND SOIL DENSITY	1.65 tons/m		
		CONTAMINATED	CLEAN
MASS TOTAL		0.58 tons	64.8 tons
MAXIMUM/SORT		56.2 kg	53.6 kg
MINIMUM/SORT		0.6 kg	47.4 kg
			00.1%
WEIGHT RECOVERY OR VOLUME RECOVER	Y		99.1%
EQUIVALENT SOIL-IN-GROUND		0.46 yd³	51.4 yd <sup>3</sup> 51.8 yd <sup>3</sup> /day
PARTICLE ACTIVITY (MAXIMUM ESTIMA	TE)	•	
TOTAL		8,402 kBq	
MAXIMUM/SORT		288 kBq	
MINIMUM/SORT		3.1 kBq	
DISPERSED + PARTICLE (REALISTIC E	STIMATE) ACTIVITY	2,955 kBq	(1,343)kBq
MAXIMUM/SORT		178 kBq	13 kBq
MINIMUM/SORT		-20055 Bq	-16 kBq
SPECIFIC ACTIVITY		5,134 Bq/kg	(21)Bq/kg
G. G			
WORK DAY			
WORK DAY START	07:00 AM		
PROCESSING START	08:05 AM		
PLANT STARTUP TIME		1.09 hr	
PROCESSING END	04:42 PM		
WORK DAY END	05:30 PM		
PLANT SHUTDOWN TIME		0.80 hr	
LUNCH PERIOD		0.5 hr	
WORK HOURS		10.0 hr	
MAX PROCESS HOURS (END-STA	RT)	8.61 hr	
ACTUAL PROCESS HOURS (TOTA	L 20-SEC SORT PERIODS)	6.84 hr	
TOTAL SYSTEM PAUSE TIME		0.51 hr	
TOTAL DOWNTIME (MAX-ACTUAL	)	1.77 hr	
TIME UTILIZATION (ACTUAL H		68.4%	
The orter and the	·		
TOTAL SOIL PROCESSING RECORDS (2-	SEC and 20-SEC)	1,641	
NONPROCESS RECORDS (Test, calibra		33	
20-SEC PROCESS RECORDS		1,232	
TOTAL SORT		2 MD>0 & MND=0	
NO SORT		862 AD=0 & MD=0	
SOME SORT		368 AD>0&0<₩0	NDmax&MND
UNEXPLAINED RECOR	DS	0	
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		
AD=0 &	MD 0		
AD<0 &	_		
, <del>-</del>			

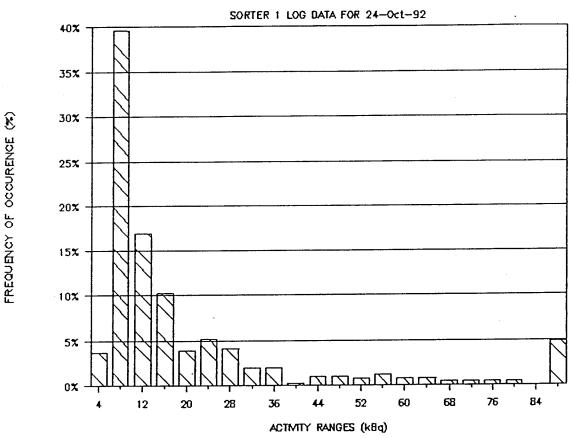
2-	-SEC CO	JNT PER100S				12,320					
		2-SEC RECORD	S WITH S	ORTS		409	AP>0				
		2-SEC RECORD			IN >1 DE	TECTOR					
			DETECTO		97		77.6%				
		3	DETECTO	RS	21		16.8%				
		4	DETECTO	RS	7		5.6%				
		5	DETECTO	RS	0		0.0%				
		6	DETECTO	RS	0		0.0%				
		7	DETECTO	RS	0		0.0%				
		8	DETECTO	RS	0		0.0%				
		T	OTAL			125					
	4										
		NET 2-SEC RE		٠.		284					
		2-SEC PERIOD				12,036					
		AVG TIME BET	WEEN 2-S	EC SORTS		86.8	sec				
1-GATE SO	ORTS	201	ACT_ND	NUMBER	SPEC_A		AC	Т_Р	SORT	FREQ%	ACT_P
DETECTO	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(	Bq)	(#)		(kBq)
1	6	3.0%	-14000	7	-261		4	000	15		4
2	23	11.4%	-12000	13	-224		8	000	162		8
3	33	16.4%	-10000	11	-187		12	000	69		12
4	33	16.4%	-8000	21	-149			000	42		16
5	44	21.9%	-6000	51	-112		20	000	16		20
6	25	12.4%	-4000	152	-75			000	21		24
7	29	14.4%	-2000	269	-37		28	000	17		28
8	8	4.0%	0	<b>3</b> 02	0		32	000	8		32
TOTAL	201		2000	242	37			000	8		36
			4000	117	75			000	1		40
2-GATE SO	ORTS	208	6000	51	112			000	4		44
DETECTO	SORTS	FREQ%	8000	11	149			000	4		48
8			10000	12	187			000	3		52
9	13	6.3%	12000	4	224			000	5		56
10	31	14.9%	14000	2				000	3		60
11	42	20.2%	16000	0	299			000	3		64
12	41	19.7%	18000	0	336			000	. 2		68
13	37	17.8%	20000	0				000	2		72
14	24	11.5%	22000	0	410			000	2		76
15	20	9.6%	24000	0	448			000	2		80
TOTAL	208		26000	0	485			000	0		84
			>28000	0	0			000	20		>84
			TOTAL	1265			TO	TAL	409		
н	PE	401		GATE1	409						
	PE	300		GATE2	208						-
• • • • • • • • • • • • • • • • • • • •	-										

REC CODE EXPLANATION

166

DISE





SORTE	24-0ct-92	-				
		ſ	).79 ±	0.04 c/sec		
	GE BACKGROUND COUNT RATE		1.15 tons/m			
	R SOIL DENSITY		1.65 tons/m			
GROUN	SOIL DENSITY	•	,	CONTAMINATED	CLEAN	
				0.66 tons	64.4 tons	
MASS	MAXIMUM/SORT			53.6 kg	53.6 kg	
	MINIMUM/SORT			0.6 kg	45.5 kg	
	HIMINON SON					
UFIGH	T RECOVERY OR VOLUME RECOVER	r				99.0%
	ALENT SOIL-IN-GROUND			0.52 yd3	51.1 yd <sup>3</sup>	51.6 yd3/day
PARTI	CLE ACTIVITY (MAXIMUM ESTIMA	TE)				
	TOTAL			14,766 kBq		
	MAXIMUM/SORT			4,197 kBq		
	MINIMUM/SORT			2.8 kBq		
				5,509 kBq	3,438 kBq	
DISPE	RSED + PARTICLE (REALISTIC E	STIMATE) ACTIVII	IY	3051 kBq	18 kBq	
	MAXIMUM/SORT			-17105 Bq	-13 kBq	
	MINIMUM/SORT		•	8,352 Bq/kg	53 Bq/kg	
	SPECIFIC ACTIVITY			67.100 355.0		
14001	NAV.					
WORK !	WORK DAY START	07:00 AM				
	PROCESSING START	08:05 AM			•	
	PLANT STARTUP TIME			1.09	hr	
	PROCESSING END	04:42 PM				
	WORK DAY END	05:30 PM				
	PLANT SHUTDOWN TIME			0.80	hr	
				0.5	£ _	
	LUNCH PERIOD			0.5		
	WORK HOURS			10.0 8.62		
	MAX PROCESS HOURS (END-STA	RT)				
	ACTUAL PROCESS HOURS (TOTA	L 20-SEC SORT PE	ERIODS)	6.81 0.51		
	TOTAL SYSTEM PAUSE TIME			1.81		
	TOTAL DOWNTIME (MAX-ACTUAL			68.17		
	TIME UTILIZATION (ACTUAL H	RS/WORK HRS)		00.17	•	
70741	SOIL PROCESSING RECORDS (2-	SEC and 20-SEC)		1,564		
	OCESS RECORDS (Test, calibra			40		
NOM! K	SOLOG REGORD (VICE)	•				
	20-SEC PROCESS RECORDS			1,226		
	TOTAL SORT			4 MD>0 & M		
	NO SORT			828 AD=0 & M		
	SOME SORT				AD <mndmax&mnd <mndmax<="" td=""><td></td></mndmax&mnd>	
	UNEXPLAINED RECOR	os		0		
	0 <ad<1kbq &="" md="">0</ad<1kbq>	1				
	& 0=QA	MD 0				

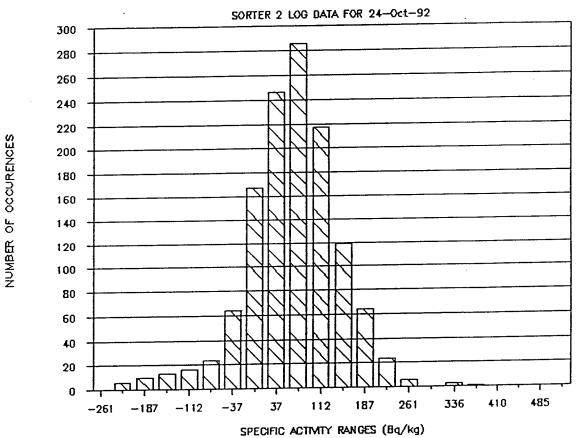
AD<0 & MD 2

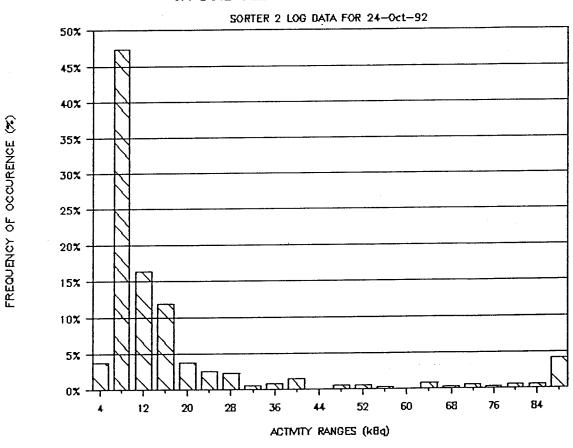
12,260

_	520 00	2-SEC RECORD		2100		338	AP>0			
					TH >1 DE		Ar - U			
		2-SEC RECORD				EIECIOR	78.7%			
			DETECTO		74					
			DETECTO		16		17.0%			
			DETECTO		4		4.3%			
			DETECTO		0		0.0%			
			DETECTO		0		0.0%			
			DETECTO		0		0.0%			
		8	DETECTO	RS	0		0.0%			
		Т	OTAL			94				
						2//				
		NET 2-SEC RE			•	244				
		2-SEC PERIOD				12,016				
		AVG TIME BET	WEEN 2-S	EC SORTS		100.5	sec			
1-GATE SO	ORTS	175	ACT_ND	NUMBER	SPEC_A		ACT_F	SORT	FREQ%	ACT_P
DETECTO	SORTS		(Bq)		(Bq/kg)		(Bq)	(#)		(kBq)
1	7	4.0%	-14000	0	-261		4000			4
2	12	6.9%	-12000	6	-224		8000	160	47.3%	8
3	30	17.1%	-10000	10	- 187		12000	55	16.3%	12
4	37	21.1%	-8000	13	-149		16000	40	11.8%	16
5	37	21.1%	-6000	16	-112		20000	13	3.8%	20
6	24	13.7%	-4000	24	-75		24000	9	2.7%	24
7	17	9.7%	-2000	64	-37		28000	8	2.4%	28
8	11	6.3%	0	167	0		32000	2	0.6%	32
TOTAL	175		2000	246	37		36000	3	0.9%	36
			4000	286	75		40000	5	1.5%	40
2-GATE SO	ORTS	163	6000	217	112		44000	0	0.0%	44
DETECTO	SORTS	FREQ%	8000	119	149		48000	2	0.6%	48
8			10000	64	187		52000	2	0.6%	52
9	9	5.5%	12000	24	224		56000	1	0.3%	56
10	19	11.7%	14000	6	261		60000	0	0.0%	60
11	31	19.0%	16000	0	299		64000	3	0.9%	64
12	40	24.5%	18000	3	336		68000	1	0.3%	68
13	32	19.6%	20000	1	373		72000	2	0.6%	72
14	24	14.7%	22000	0	410		76000	1	0.3%	76
15	8	4.9%	24000	0	448		80000	2	0.6%	80
TOTAL	163	4.7%	26000	0	485		84000		0.6%	84
TOTAL	103		>28000	0	0		>84000		4.1%	>84
			TOTAL	1266	Ū		TOTAL			
ทค	ĽΕ	341	I	GATE1	338					
MP	Έ	342	•	GATE2	163					
DI	SE	312								

REC CODE EXPLANATION

2-SEC COUNT PERIODS





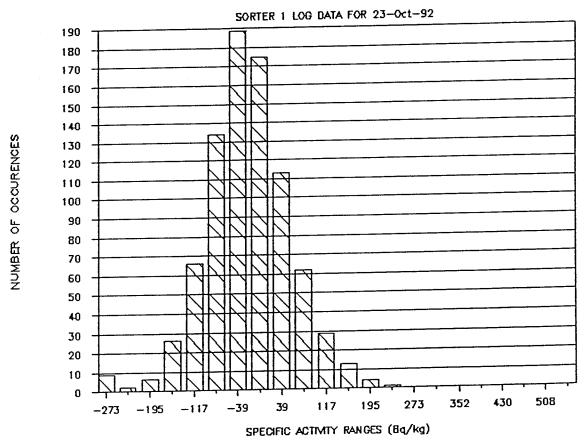
SORTER 1 23-Oct-92	-		
AVERAGE BACKGROUND COUNT RATE	0.79 ± 0	).02 c/sec	
SORTER SOIL DENSITY	1.1 tons/m³		
GROUND SOIL DENSITY	1.65 tons/m³		
PROOND SOLE DENSITY		CONTAMINATED	CLEAN
MASS TOTAL		0.60 tons	41.1 tons
MAXIMUM/SORT		53.8 kg	51.2 kg
MINIMUM/SORT		0.6 kg	46.1 kg
11.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1			09.4%
WEIGHT RECOVERY OR VOLUME RECOVE	RY		98.6% 32.6 yd³ 33.1 yd³/day
EQUIVALENT SOIL-IN-GROUND		0.47 yd <sup>3</sup>	32.6 yd <sup>3</sup> 33.1 yd <sup>3</sup> /day
PARTICLE ACTIVITY (MAXIMUM ESTIM	ATE)		
TOTAL	•	6,248 kBq	
MAXIMUM/SORT		366 kBq	
MINIMUM/SORT		2.8 kBq	
		2,326 kBq	(1,609)kBq
DISPERSED + PARTICLE (REALISTIC	ESTIMATE) ACTIVITY	2,320 kBq 220 kBq	10 kBq
MAXIMUM/SORT		220 KBQ 0 Bq	-16 kBq
MINIMUM/SORT		3,905 Bq/kg	(39)Bq/kg
SPECIFIC ACTIVITY		3,903 pd/kg	(2002.400
WORK DAY			
WORK DAY START	07:00 AM		
PROCESSING START	12:44 PM		
PLANT STARTUP TIME		5.74 hr	
PROCESSING END	05:16 PM		
WORK DAY END	05:30 PM		
PLANT SHUTDOWN TIME		0.24 hr	
LUNCH PERIOD		0.5 hr	
WORK HOURS		10.0 hr	
MAX PROCESS HOURS (END-ST	ART)	4.53 hr	
ACTUAL PROCESS HOURS (TOT	AL 20-SEC SORT PERIODS)	4.52 hr	
TOTAL SYSTEM PAUSE TIME		0.04 hr	
TOTAL DOWNTIME (MAX-ACTUA		0.01 hr	
TIME UTILIZATION (ACTUAL	HRS/WORK HRS)	45.2%	-
TOTAL SOIL PROCESSING RECORDS (2	-SEC and 20-SEC)	1,119	
NONPROCESS RECORDS (Test, calibr		15	
NOW ROCCOS RESONANT (1994)	•		
20-SEC PROCESS RECORDS		814	
TOTAL SORT		4 MD>0 & MND=	
NO SORT		494 AD=0 & MD=0	
SOME SORT		316 AD>0&0◆HD◆H	NDmax&MND
UNEXPLAINED RECO	RDS	0	
0 <ad<1kbq &="" mo="">0</ad<1kbq>	1		
AD=0	8 MD 0		
AD<0	& MD 0		

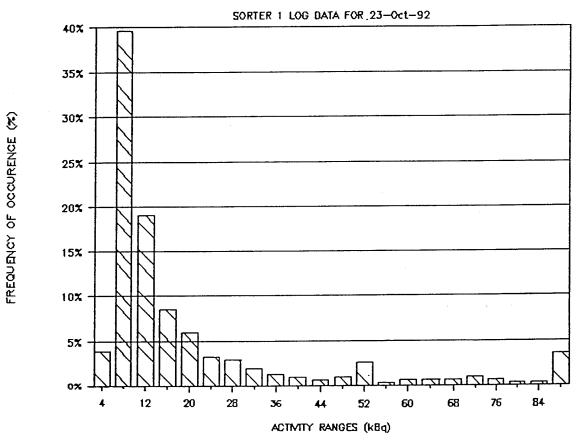
8,140

2	-SEC CO	UNT PERIODS				8,140				
		2-SEC RECORD	S WITH S	ORTS		<b>30</b> 5	AP>0			
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR				
		2	DETECTO	RS	71		86.6%			
		3	DETECTO	RS	10		12.2%			
		4	DETECTO	RS	1		1.2%			
		5	DETECTO	RS	0		0.0%			
		6	DETECTO	RS	0		0.0%			
		7	DETECTO	RS	0		0.0%			
		8	DETECTO	RS	0		0.0%			
		T	OTAL			82				
		ust 2 ose ps	coppe ut	TH COUTE		223				
		NET 2-SEC RE								
		2-SEC PERIOD				7,917 73.0				
		AVG TIME BET	MEEN 2-2	EC SORTS		13.0	Sec			
1-GATE SC	ORTS	145	ACT_ND	NUMBER	SPEC_A		ACT_P	SORT	FREQ%	ACT_P
DETECTO	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(pg)	(#)		(kBq)
_	•	0.09	1/000	0	277		4000	12	3.9%	4
1	0	0.0%	-14000 -12000	9 2			8000	121	39.7%	8
2	14	9.7%		6	-234 -195		12000	58	19.0%	12
3	19	13.1%	-10000	26	-156		16000	26	8.5%	16
4	33	22.8% 27.6%	-8000 -6000	26 66	-117		20000	18	5.9%	20
5	40 23	15.9%	-4000	134	-78		24000	10	3.3%	24
6 7	<u>2</u> 12	8.3%	-2000	189	-39		28000	9	3.0%	28
8	4	2.8%	0	175	0		32000	6	2.0%	32
TOTAL	145	2.0%	2000	113	39		36000	4	1.3%	36
TOTAL	143		4000	62	78		40000	3	1.0%	40
2-GATE SO	אסדכ	160	6000	29	117		44000	2	0.7%	44
DETECTO	SORTS	FREQ%	8000	13	156		48000	3	1.0%	48
8	30013	, KEGA	10000	4	195		52000	8	2.6%	52
9	5	3.1%	12000	1	234		56000	1	0.3%	56
10	21	13.1%	14000	0	273		60000	2	0.7%	60
11	32	20.0%	16000	0	313		64000	2	0.7%	64
12	45	28.1%	18000	0	352		68000	2	0.7%	68
13	31	19.4%	20000	0	391		72000	3	1.0%	72
14	16	10.0%	22000	0	430		76000	2	0.7%	76
15	10	6.3%	24000	0	469		80000	1	0.3%	80
TOTAL	160	0.5%	26000	0	508		84000	1	0.3%	84
·OINE	,,,,		>28000	0	0		>84000	11	3.6%	>84
			TOTAL	829	,		TOTAL	305		
HP	E	317	(	SATE1	305					
MP	Έ	285	(	SATE2	160					
ĐI	SE	332								

REC CODE EXPLANATION

2-SEC COUNT PERIODS





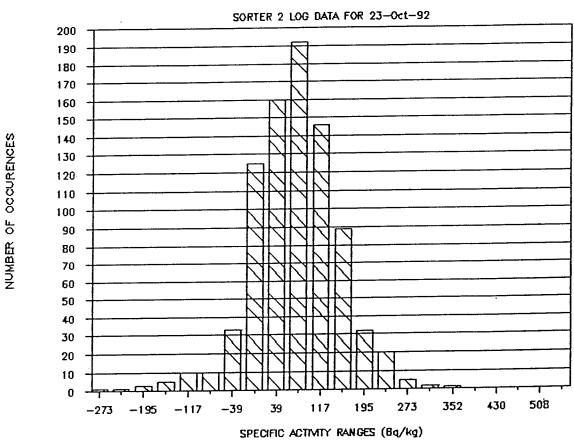
SORTER 2 23-Oct-92	·		
AVERAGE BACKGROUND COUNT RATE	0.81 ±	0.03 c/sec	
	1.1 tons/m³		
SORTER SOIL DENSITY	1.65 tons/m³		
GROUND SOIL DENSITY		CONTAMINATED	CLEAN
		0.65 tons	40.2 tons
MASS TOTAL		49.4 kg	51.2 kg
MAXIMUM/SORT		0.6 kg	44.2 kg
MINIMUM/SORT			
WEIGHT RECOVERY OR VOLUME RECOVER	Υ		98.4%
EQUIVALENT SOIL-IN-GROUND		0.51 yd3	31.9 yd <sup>3</sup> 32.4 yd <sup>3</sup> /day
EGGIVALENT SOLE-IN GROOMS			
PARTICLE ACTIVITY (MAXIMUM ESTIMA	TE) .		
TOTAL		5,449 kBq	
MAXIMUM/SORT		490 kBq	
MINIMUM/SORT		2.6 kBq	
HIMINON, SSA.			
DISPERSED + PARTICLE (REALISTIC E	STIMATE) ACTIVITY	2,449 kBq	2,272 kBq
MAXIMUM/SORT		331 kBq	17 kBq
MINIMUM/SORT		0 Bq	-14 kBq
SPECIFIC ACTIVITY		3,775 Bq/kg	57 Bq/kg
37 2011 10 1101 1101			
WORK DAY			
WORK DAY START	07:00 AM		
PROCESSING START	12:43 PM		
PLANT STARTUP TIME		5.73 hr	
PROCESSING END	05:16 PM		
WORK DAY END	05:30 PM		
PLANT SHUTDOWN TIME		0.24 hr	
•			
LUNCH PER100		0.5 hr	
WORK HOURS		10.0 hr	
MAX PROCESS HOURS (END-STA	RT)	4.54 hr	
ACTUAL PROCESS HOURS (TOTA	L 20-SEC SORT PERIODS)	4_43 hr	
TOTAL SYSTEM PAUSE TIME		0.14 hr	
TOTAL DOWNTIME (MAX-ACTUAL	.)	0.11 hr	
TIME UTILIZATION (ACTUAL H		44.3%	
TOTAL SOIL PROCESSING RECORDS (2-	SEC and 20-SEC)	1,062	
NONPROCESS RECORDS (Test, calibra	ition, etc)	38	
		700	
20-SEC PROCESS RECORDS		798	
TOTAL SORT		0 MD>0 MND=0	
NO SORT		492 AD=0 & MD=0	
SOME SORT		306 AD>0&0 <md<mf< td=""><td>Ining Yalund Auding Y</td></md<mf<>	Ining Yalund Auding Y
UNEXPLAINED RECOR	RDS	(6)	
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		
8 0=QA			
AD<0 8	A MD 0		

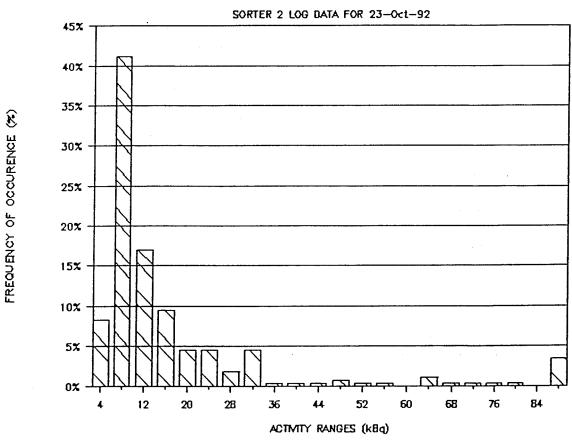
7,980

2-	SEC COL	JAT PERIODS				7,900					
		2-SEC RECORD	S WITH S	ORTS		264	AP>0				
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR					
		2	DETECTO	RS	66		85.7%				
		3	DETECTO	RS	8		10.4%				
		4	DETECTO	RS	3		3.9%				
		5	DETECTO	RS	0		0.0%				
		6	DETECTO	RS	0		0.0%				
		7	DETECTO	RS	0		0.0%				
		8	DETECTO	RS	0		0.0%				
		τ	OTAL			77					
	-	NET 2-SEC RE				187					
		2-SEC PERIOD				7,793					
		AVG TIME BET	WEEN 2-S	EC SORTS		85.3	sec				
1-GATE SC	DTC	138	ACT_ND	NIMRER	SPEC_A		A	CT_P	SORT	FREQ%	ACT_P
	SORTS	FREQ%	(Bq)		(Bq/kg)			(Bq)	(#)		(kBq)
DETECTO	30K 13	1 KLUA	(64)	()	(04) (3)						
1	2	1.4%	-14000	1	-273			4000	22	8.3%	4
2	18	13.0%	-12000	1	-234			8000	109	41.1%	8
3	23	16.7%	-10000	3	-195		1	2000	45	17.0%	12
4	31	22.5%	-8000	5	-156		1	6000	25	9.4%	16
5	34	24.6%	-6000	10	-117		2	20000	12	4.5%	20
6	17		-4000	10	-78		ā	24000	12	4.5%	24
7	10	7.2%	-2000	33	-39		2	28000	5	1.9%	28
8	3	2.2%	0	125	0		3	2000	12	4.5%	32
TOTAL	138		2000	160	39		3	6000	1	0.4%	36
			4000	192	78		4	0000	1	0.4%	40
2-GATE SC	RTS	126	6000	146	117		4	4000	1	0.4%	44
DETECTO	SORTS	FREQ%	8000	89	156		4	8000	2	0.8%	48
8			10000	32	195		5	2000	1	0.4%	52
9	9	7.1%	12000	20	234		5	6000	1	0.4%	56
10	13	10.2%	14000	5	273		6	0000	0	0.0%	60
11	30	23.6%	16000	2	313		6	4000	3	1.1%	64
12	29	22.8%	18000	1	352		6	8000	1	0.4%	68
13	29	22.8%	20000	0	391		7	2000	1	0.4%	72
14	12	9.4%	22000	0	430		7	6000	1	0.4%	76
15	5	3.9%	24000	0	469		8	30000	1	0.4%	80
TOTAL	127		26000	0	508		8	34000	0	0.0%	84
			>28000	0	0		>8	4000	9	3.4%	>84
			TOTAL	835			1	OTAL	265		
	·-	2/0		CATE4	241						
HF		260		GATE1	264 126						
MP		298	,	GATE2	120						
DI	SE	462									

REC CODE EXPLANATION

2-SEC COUNT PERIODS





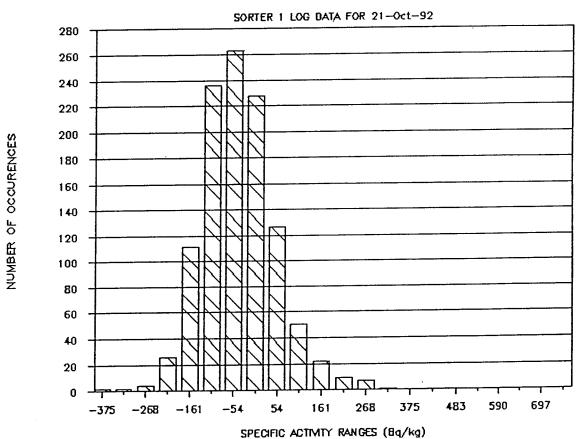
AVERAGE BACKGROUND COUNT RATE	SORTER 1 21-0ct-92	-		
SORTER SOIL DENSITY   0.8 tons/m²   CONTAMINATED   CLEAM   CL	AVERACE RACKGROUND COUNT RATE	0.77 ± 0	.05 c/sec	
MASS TOTAL   NATIONAL   NATION		0.8 tons/m³		
MASS TOTAL  NAXIMUM/SORT  NINIMBM/SORT  NINIMBM/SORT  NINIMBM/SORT  NINIMBM/SORT  NO.50 kg 37.3 kg 37.4 kg 37.3 kg 37.3 kg 37.4 kg 37.3 kg 37.4 kg 37.3 kg 37.4 kg 37.3 kg 37.4 kg 37.3 kg 37.8 kg 37.3 kg 37.8 kg 37.3 kg 31.3 yd¹ day 31.8 yd¹/day 31.8 yd¹/day 31.8 yd¹/day 31.8 yd¹/day 31.8 yd¹/day 31.8 yd¹/day 31.8 yd²/day 31.8 yd²/day 31.8 yd²/day 31.8 yd²/day 31.8 yd²/day 31.8 yd²/day 31.8 kg 411 kg 41 k		1.65 tons/m³		
MAST IOTAL  MATHEMYSORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MATHEMYSORT  MINIMUM/SORT  MORK DAY  MORK DAY  MORK DAY START  PLANT STARTUP THE  PROCESSING START  PLANT STARTUP THE  PROCESSING START  PLANT STARTUP THE  PROCESSING SEND  MORK DOY SHART  MURK DAY END  MORK DOYS HOURS (END-START)  ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS)  TOTAL SYSTEM PAUSE TIME  ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS)  TOTAL SYSTEM PAUSE TIME  TOTAL DOWNTHER (MAX-ACTUAL)  TOTAL SYSTEM PAUSE TIME  TOTAL DOWNTHER (MAX-ACTUAL)  TOTAL SYSTEM PAUSE TIME  TOTAL SONTE (MAX-ACTUAL)  TOTAL SOLT SORT (ACTUAL HRS/MORK HRS)  TOTAL SOLT CANCEL (ACTUAL HRS/MORK HRS)  TOTAL SOLT CANCEL (ACTUAL HRS/MORK HRS)  TOTAL SOLT CONCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (Test, calibration, etc)  TOTAL SOLT CANCEL (ACTUAL HRS/MORK HRS)  TOTAL SORT (ACTUAL HRS/MORK HRS)  TOTAL SORT SONE SORT  MINIMUM/SORT  MINIMUM/SORT  MO SORT  MO SORT  MO SORT  MO SORT  MO SORT  MO DO & MHO DO  MORK DAY  MORK DAY  MORK DAY  MORK DAY  MAX PROCESS RECORDS  TOTAL SORT CONCESSING PECORDS (1-43 AD-08 O-40 -4400max&MHO -4400max&	and the second second		CONTAMINATED	
MAXIMUM/SORT 10.5 kg 37.5 kg 37.5 kg 18.5 kg 1	MACS TOTAL		0.63 tons	
MINIMUM/SORT 0 YOUME RECOVERY OR YOU AND A STATE OF TOTAL OR YOU AND				
METINIT RECOVERY OR VOLUME RECOVERY   20.50 yd			0.5 kg	34 kg
MEIGHT RECOVERY OR VOLUME RECOVERY   0.50 yd¹   31.3 yd¹   31.8 yd¹/day				00.7%
PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL  MAXIMUM/SORT MINIMUM/SORT MOKE DAY MORE DAY START MORE DAY MORE DAY MORE DAY START MORE DAY MORE	WEIGHT RECOVERY OR VOLUME RECOVERY			
TOTAL  MAXIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  ANAXIMUM/SORT  ANAXIMUM/SORT  MINIHUM/SORT  ANAXIMUM/SORT  MINIHUM/SORT  SPECIFIC ACTIVITY   WORK DAY  WORK DAY  WORK DAY START  PROCESSING END  O4:53 PM  WORK DAY END  O.50 hr  LUNCH PERIOD  WORK HOURS  MAX PROCESS HOURS (END-START)  ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS)  TOTAL SYSTEM PAUSE TIME  TOTAL DOWNTIME (MAX-ACTUAL)  TIME UTILIZATION (ACTUAL HRS/WORK HRS)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  TOTAL SOIL PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  NO SORT  O4AD-1KBQ & MO> 0 143  AD=0 & MO> 0 143  AD=0 & MO 0 143  AD=0 & MO> 0 5 AND-0 & MOD-0 AND-0			0.50 yd <sup>3</sup>	31.3 ya 31.6 ya /uay
TOTAL  MAXIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  ANAXIMUM/SORT  ANAXIMUM/SORT  MINIHUM/SORT  ANAXIMUM/SORT  MINIHUM/SORT  SPECIFIC ACTIVITY   WORK DAY  WORK DAY  WORK DAY START  PROCESSING END  O4:53 PM  WORK DAY END  O.50 hr  LUNCH PERIOD  WORK HOURS  MAX PROCESS HOURS (END-START)  ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS)  TOTAL SYSTEM PAUSE TIME  TOTAL DOWNTIME (MAX-ACTUAL)  TIME UTILIZATION (ACTUAL HRS/WORK HRS)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  TOTAL SOIL PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  NO SORT  O4AD-1KBQ & MO> 0 143  AD=0 & MO> 0 143  AD=0 & MO 0 143  AD=0 & MO> 0 5 AND-0 & MOD-0 AND-0				
MAXIMUM/SORT   173 kBq   3.4 kBq	PARTICLE ACTIVITY (MAXIMUM ESTIMAT	Έ)	4 000 to-	•
MAXIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  MINIMUM/SORT  SPECIFIC ACTIVITY   WORK DAY  MORK DAY  MORK DAY START  PLANT STARTD  PROCESSING START  O7:00 AM  PROCESSING START  O7:42 AM  PLANT STARTDP TIME  MORK DAY END  O5:30 PM  WORK DAY SHO  LUNCH PERIOD  MORK HOURS  MAX PROCESS HOURS (END-START)  ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS)  TOTAL STRIFT PAUSE TIME  TOTAL DOWNTIME (MAX-ACTUAL)  TOTAL DOWNTIME (MAX-ACTUAL)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  TOTAL SOIL PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  O-AD-1KBQ & MO-D  143  AD-0 & MD  143  AD-0 & MD  2,077 kBq (2,721)kBq (69)Bq (49)Bq (69)Bq (49)Bq (69)Bq (49)Bq (69)Bq (49)Bq	TOTAL		•	
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  MINIMM/SORT  MINIMM/SORT  MINIMM/SORT  SPECIFIC ACTIVITY   WORK DAY  WORK DAY  WORK DAY  MORK DAY  MORK DAY  MORK DAY  MORK DAY START  PROCESSING END  0.70 hr  PROCESSING END  0.5 hr  MORK DAY END  D.5 hr  LUNCH PERIOD  MORK DAYS  MAX PROCESS HOURS (TOTAL 20-SEC SORT PERIODS)  TOTAL SYSTEM PAUSE TIME  TOTAL DOMNTIME (MAX-ACTUAL)  TIME UTILIZATION (ACTUAL HRS/NORK HRS)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  TOTAL SOIL PROCESS INGRECORDS (2-SEC and 20-SEC)  TOTAL SOIL PROCESS RECORDS  TOTAL SORT  NO SORT  NO SORT  NO SORT  MINIMM/SORT  MAX PROCESS  TOTAL SORT  TOTAL SOUL PROCESS RECORDS  TOTAL SOIL PROCESS RECORDS  TOTAL SOIL PROCESS RECORDS  TOTAL SOIL PROCESS RECORDS  TOTAL SOIL PROCESS RECORDS  TOTAL SORT  NO SORT  NO SORT  MORE SORT  UNEXPLAINED RECORDS  O ADD-1 & MD D 0  TO ADD-1 & MD D 0  TO ADD-1 & MD D D 0  TO ADD-1 & MD D D 0  TO ADD-1 & MD D D D D D D D D D D D D D D D D D	MAXIMUM/SORT		•	
MAXIMUM/SORT   83 kBq   11 kBq	MINIMUM/SORT		3.4 KBQ	
MAXIMUM/SORT   83 kBq   11 kBq			2 007 kBa	(2.721)kBa
MAXIMUM/SORT MINIMUM/SORT SPECIFIC ACTIVITY  WORK DAY  WORK DAY  WORK DAY START O7:00 AM PROCESSING START O7:42 AM PLANT STARTUP TIME PROCESSING END O5:30 PM  PLANT SHUTDOWN TIME  LUNCH PERIOD WORK DAY END O5:30 PM  PLANT SHUTDOWN TIME  LUNCH PERIOD WORK HOURS MAX PROCESS HOURS (END-START) ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS) TOTAL SYSTEM PAUSE TIME TOTAL DOWNTIME (MAX-ACTUAL) TIME UTILIZATION (ACTUAL HRS/MORK HRS)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) NONPROCESS RECORDS TOTAL SOIT FORCESSING RECORDS (2-SEC and 20-SEC) NONPROCESS RECORDS TOTAL SOIT NO SORT SOME SORT UNEXPLAINED RECORDS 11,074 6 MD>0 & MND=0 605 AD=0 & MD=0 605 AD=0 & MD=0 605 AD=0 & MD=0 605 AD=0 & MD-0 606 AD=0 & MD-0 607 AD=0 & MD-0 607 AD=0 & MD-0 608 AD=0 & MD-0 608 AD=0 & MD-0 609 AD=0	DISPERSED + PARTICLE (REALISTIC ES	TIMATE) ACTIVITY		
WORK DAY  WORK DAY  WORK DAY START  PROCESSING START  PLANT STARTUP TIME  PROCESSING END  WORK DAY END  DIANT SHARTON  PLANT STARTUP TIME  PROCESSING END  WORK DAY END  DIANT SHARTON  PLANT SHARTON  TOTAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS)  TOTAL SYSTEM PAUSE TIME  TOTAL DOWNTIME (MAX-ACTUAL)  TIME UTILIZATION (ACTUAL HRS/WORK HRS)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  O-AD-SIEND RECORDS	MAXIMUM/SORT		•	•
NORK DAY				·
MORK DAY START 07:00 AM PROCESSING START 07:42 AM PLANT STARTUP TIME PROCESSING END 04:53 PM WORK DAY END 05:30 PM PLANT SHUTDOWN TIME  LUNCH PERIOD 05:30 PM  PLANT SHUTDOWN TIME  LUNCH PERIOD 0.5 hr  MAX PROCESS HOURS (END-START) 9.19 hr  ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS) 5.97 hr  TOTAL SYSTEM PAUSE TIME 1.18 hr  TOTAL DOWNTHME (MAX-ACTUAL) 3.22 hr  TIME UTILIZATION (ACTUAL HRS/WORK HRS) 59.6%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 1,365  NONPROCESS RECORDS (Test, calibration, etc) 13  20-SEC PROCESS RECORDS (Test, calibration, etc) 13  20-SEC PROCESS RECORDS (4-SEC and 20-SEC) 1,074  TOTAL SORT 605 AD=0 & MD=0 & MD>0  10-AD<1kBq & MD>0 143  AD=0 & MD 0 143	SPECIFIC ACTIVITY		3,331 647 43	
MORK DAY START 07:00 AM PROCESSING START 07:42 AM PLANT STARTUP TIME PROCESSING END 04:53 PM WORK DAY END 05:30 PM PLANT SHUTDOWN TIME  LUNCH PERIOD 05:30 PM  PLANT SHUTDOWN TIME  LUNCH PERIOD 0.5 hr  MAX PROCESS HOURS (END-START) 9.19 hr  ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS) 5.97 hr  TOTAL SYSTEM PAUSE TIME 1.18 hr  TOTAL DOWNTHME (MAX-ACTUAL) 3.22 hr  TIME UTILIZATION (ACTUAL HRS/WORK HRS) 59.6%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 1,365  NONPROCESS RECORDS (Test, calibration, etc) 13  20-SEC PROCESS RECORDS (Test, calibration, etc) 13  20-SEC PROCESS RECORDS (4-SEC and 20-SEC) 1,074  TOTAL SORT 605 AD=0 & MD=0 & MD>0  10-AD<1kBq & MD>0 143  AD=0 & MD 0 143	NOW DAY			
PROCESSING START 07:42 AM  PLANT STARTUP TIME  PROCESSING END 04:53 PM  MORK DAY END 05:30 PM  PLANT SHUTDOWN TIME  LUNCH PERIOD  MORK HOURS  MAX PROCESS HOURS (END-START)  ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS)  TOTAL SYSTEM PAUSE TIME  TOTAL DOWNTIME (MAX-ACTUAL)  TIME UTILIZATION (ACTUAL HRS/MORK HRS)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (Test, calibration, etc)  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0-AD-1kbq & MD-0  143  AD=0 & MD  10   10  10  10  10  10  10  10  10  1		07:00 AM		
PLANT STARTUP TIME PROCESSING END  04:53 PM  MORK DAY END  05:30 PM  PLANT SHUTDOWN TIME   LUNCH PERIOD  WORK HOURS  MAX PROCESS HOURS (END-START)  ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS)  TOTAL SYSTEM PAUSE TIME  TOTAL DOWNTIME (MAX-ACTUAL)  TIME UTILIZATION (ACTUAL HRS/WORK HRS)   TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (Test, calibration, etc)  1,365  NONPROCESS RECORDS (Test, calibration, etc)  1,365  NONPROCESS RECORDS (1-SEC and 20-SEC)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  TOTAL SOIL PROCESS RECORDS  1,074  6 MD>0 & MND=0  605 AD=0 & MD=0 & MND>0  143  AD=0 & MD 0  143  AD=0 & MD 0  143  AD=0 & MD 0				
PROCESSING END 04:53 PM  WORK DAY END 05:30 PM  PLANT SHUTDOWN TIME  LUNCH PERIOD 0.62 hr  LUNCH PERIOD 0.5 hr  WORK HOURS 10.0 hr  MAX PROCESS HOURS (END-START) 9.19 hr  ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS) 5.97 hr  TOTAL SYSTEM PAUSE TIME 1.18 hr  TOTAL DOMNTIME (MAX-ACTUAL) 3.22 hr  TIME UTILIZATION (ACTUAL HRS/WORK HRS) 59.6%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 13  LONDROCESS RECORDS (Test, calibration, etc) 13  20-SEC PROCESS RECORDS 1,074  TOTAL SORT 6 MD>0 & MND=0  6 MD>0  6 MD>0 & MND=0  6 MD>0  7 MD=0 & MND=0  8 MD=0 & MND=0  9 AD=0 & MD=0  143  AD=0 & MD=0  143  AD=0 & MD=0  1443  AD=0 & MD=0			0.70 hr	
NORK DAY END   05:30 PM		04:53 PM		
PLANT SHUTDOWN TIME				
LUNCH PERIOD  WORK HOURS  MAX PROCESS HOURS (END-START)  ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS)  TOTAL SYSTEM PAUSE TIME  TOTAL DOWNTIME (MAX-ACTUAL)  TIME UTILIZATION (ACTUAL HRS/WORK HRS)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (Test, calibration, etc)  1,365  NONPROCESS RECORDS (Test, calibration, etc)  1,074  TOTAL SORT  NO SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 <ad<1rbq &="" md="">0  143  AD=0 &amp; MD  0</ad<1rbq>			0.62 hr	
10.0 hr				
MORK HOURS	LUNCH PERIOD		0.5 hr	
ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS)  ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS)  TOTAL SYSTEM PAUSE TIME  TOTAL DOWNTIME (MAX-ACTUAL)  TIME UTILIZATION (ACTUAL HRS/MORK HRS)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (Test, calibration, etc)  1,365  NONPROCESS RECORDS (Test, calibration, etc)  1,074  6 MD>0 & MND=0  6 MD>0 & MND=0  605 AD=0 & MD=0 & MND>0  10TAL SORT  UNEXPLAINED RECORDS  0 <ad<1kbq &="" md="">0  143  AD=0 &amp; MD 0</ad<1kbq>				
ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS)  TOTAL SYSTEM PAUSE TIME  TOTAL DOWNTIME (MAX-ACTUAL)  TIME UTILIZATION (ACTUAL HRS/WORK HRS)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 <ad<1kbq &="" md="">0  1.365  1,074  6 MD&gt;0 &amp; MND=0  605 AD=0 &amp; MD=0 &amp; MND&gt;0  463 AD&gt;0&amp;0<ad<4ndmax&mnd<anndmax&mnd<anndmax &="" 0="" md="" oad<1kbq="">0  143  AD=0 &amp; MD 0</ad<4ndmax&mnd<anndmax&mnd<anndmax></ad<1kbq>	MAX PROCESS HOURS (END-STAR	(T)		
TOTAL SYSTEM PAUSE TIME  TOTAL DOWNTIME (MAX-ACTUAL)  TIME UTILIZATION (ACTUAL HRS/WORK HRS)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0-AD-1kBq & MD>0  1.18 hr  3.22 hr  59.6%  1,365  13  1,074  6 MD>0 & MND=0  605 AD=0 & MD=0  463 AD>0&0-MNDmax&MND O-AD-1kBq & MD>0  143  AD=0 & MD 0	ACTUAL PROCESS HOURS (TOTAL	20-SEC SORT PERIODS)		
TOTAL DOWNTIME (MAX-ACTUAL)  TIME UTILIZATION (ACTUAL HRS/WORK HRS)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 <ad-0 &="" md="">0  143  AD=0 &amp; MD  0</ad-0>				
TIME UTILIZATION (ACTUAL HRS/MORK HRS)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 <ad<1kbq &="" md="">0  1,365  13  1,074  6 MD&gt;0 &amp; MND=0  605 AD=0 &amp; MD=0 &amp; MND&gt;0  463 AD&gt;0&amp;0-4MNDmax&amp;MND0  143  AD=0 &amp; MD  0</ad<1kbq>	TOTAL DOWNTIME (MAX-ACTUAL)	1		
NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  1,074  10TAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 <ad<1kbq &="" md="">0  13  1,074  6 MD&gt;0 &amp; MND=0  605 AD=0 &amp; MD=0 &amp; MND&gt;0  463 AD&gt;0&amp;0&lt;4MD&lt;4MNDmax&amp;MND&lt;4MNDmax  0  0<ad<1kbq &="" md="">0  143  AD=0 &amp; MD  0</ad<1kbq></ad<1kbq>	TIME UTILIZATION (ACTUAL HR	S/WORK HRS)	59.6%	
NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  1,074  10TAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 <ad<1kbq &="" md="">0  13  1,074  6 MD&gt;0 &amp; MND=0  605 AD=0 &amp; MD=0 &amp; MND&gt;0  463 AD&gt;0&amp;0&lt;4MD&lt;4MNDmax&amp;MND&lt;4MNDmax  0  0<ad<1kbq &="" md="">0  143  AD=0 &amp; MD  0</ad<1kbq></ad<1kbq>		oro d 20 ccc)	1 365	
20-SEC PROCESS RECORDS   1,074   6 MD>0 & MND=0   605 AD=0 & MD=0 & MND>0   605 AD=0 & MD=0 & MND>0   605 AD=0 & MD=0 & MND=MNDmax & MNDmax & MND=MNDmax & MND=				
TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 < AD < 1 kBq & MD > 0  143  AD = 0 & MD > 0  6 MD > 0 & MND = 0  605 AD = 0 & MD = 0 & MND > 0  605 AD = 0 & MD = 0  605 AD = 0 & MD > 0  605 A	NONPROCESS RECORDS (Test, Cattorat	tion, etc)		
TOTAL SORT 6 MD>0 & MND=0  NO SORT 605 AD=0 & MD=0 & MND>0  SOME SORT 463 AD>0&0 <md<mndmax&mnd<mndmax &="" 0<ad<1kbq="" md="" records="" unexplained="">0 143 AD=0 &amp; MD 0  O</md<mndmax&mnd<mndmax>	20-SEC PROCESS RECORDS		1,074	
SOME SORT 463 AD>0&0 <md<mndmax&mnd<mndmax &="" 0<ad<1kbq="" md="" records="" unexplained="">0 143 AD=0 &amp; MD 0</md<mndmax&mnd<mndmax>				
SOME SORT  UNEXPLAINED RECORDS  0 <ad<1kbq &="" md="">0  AD=0 &amp; MD  0  463 AD&gt;0&amp;0&lt;4MD&lt;4MNDmax&amp;MND&lt;4MNDmax  0  0  0  0  0  0  0  0  0  0  0  0  0</ad<1kbq>				
UNEXPLAINED RECORDS  0 <ad<1kbq &="" md="">0  AD=0 &amp; MD  0</ad<1kbq>			463 AD>0&0 <md<mi< td=""><td>NDmax&amp;MND<mndmax< td=""></mndmax<></td></md<mi<>	NDmax&MND <mndmax< td=""></mndmax<>
0 <ad<1kbq &="" md="">0 143 AD=0 &amp; MD 0</ad<1kbq>		S	0	
AD=0 & MD 0				
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	& 0>DA	MD 3		

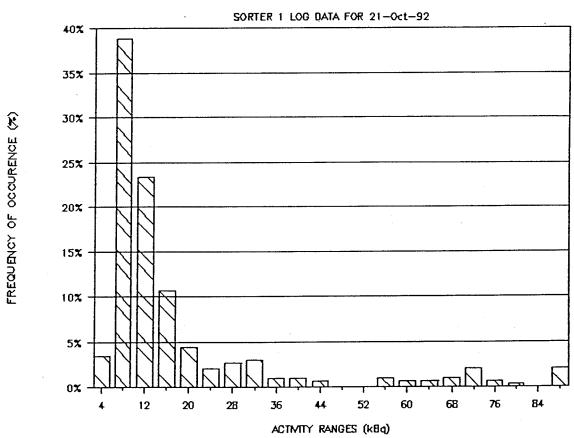
10,740

		2-SEC RECORE	S WITH S	SORTS		291	AP>0			
		2-SEC RECORD	S WITH F	POSITIVES	IN >1 D	ETECTOR				
		2	DETECTO	ORS	63		79.7%			
		3	DETECTO	ORS	15		19.0%			
		4	DETECTO	ORS .	1		1.3%			
		5	DETECTO	)RS	0		0.0%			
		6	DETECTO	)RS	0		0.0%			
		7	DETECTO	RS	0		0.0%			
			DETECTO	)RS	0		0.0%			
,		1	OTAL			79				
						242				
		NET 2-SEC RE				212			•	
		2-SEC PERIOD AVG TIME BET				10,528	600			
		AVG TIME BET	MCEN 2-3	EC SURTS		101.5	Sec			
1-GATE SO	ORTS	136	ACT_ND	NUMBER	SPEC_A		ACT_P	SORT	FREQ%	ACT_P
DETECTO	SORTS	FREQ%	_ (Bq)		(Bq/kg)		(Bq)	(#)		(kBq)
1	3	2.2%	-14000	2	-375		4000	10	3.4%	4
2	14	10.3%	-12000	2	-322		8000	113	38.8%	8
3	27	19.9%	-10000	4	-268		12000	68	23.4%	12
4	27	19.9%	-8000	26	-214		16000	31	10.7%	16
5	19	14.0%	-6000	112	-161		20000	13	4.5%	20
6	18	13.2%	-4000	236	-107		24000	6	2.1%	24
7	21	15.4%	-2000	263	-54		28000	8	2.7%	28
8	7	5.1%	0	228	0		32000	9	3.1%	32
TOTAL	136		2000	127	54		36000	3	1.0%	36
			4000	51	107		40000	3	1.0%	40
2-GATE SC		155	6000	22	161		44000	2	0.7%	44
DETECTO	SORTS	FREQ%	8000	9	214		48000	0	0.0%	48 53
8	-		10000	7	268		52000	0 3	0.0% 1.0%	52 56
9	7	4.5%	12000	1	322		56000 60000	2	0.7%	60
10	23	14.8%	14000	0	375 429		64000	2	0.7%	64
11	34	21.9%	16000	0	483		68000	3	1.0%	68
12 13	30 21	19.4% 13.5%	18000 20000	0	536		72000	6	2.1%	72
14	19	12.3%	22000	0	590		76000	2	0.7%	76
15	21	13.5%	24000	0	643		80000	1	0.3%	80
TOTAL	155	13.3%	26000	0	697		84000	0	0.0%	84
TOTAL	,,,,		>28000	0	0		>84000	6	2.1%	>84
			TOTAL	1090	·		TOTAL	291	2111	
			TOTAL	.070			,,,,,,			
HP	E	303		GATE1	291					
MP		532		GATE2	155					
DI		498			_					

REC CODE EXPLANATION

2-SEC COUNT PERIODS

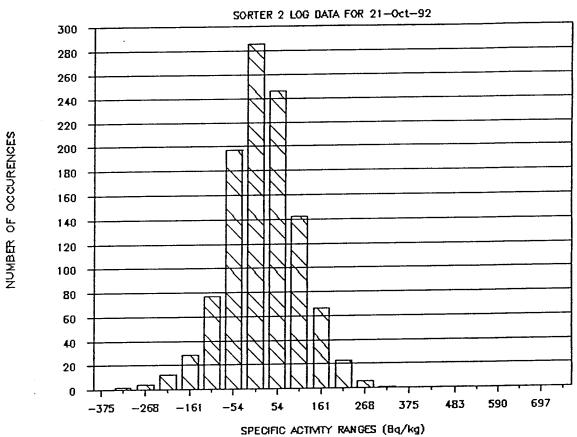


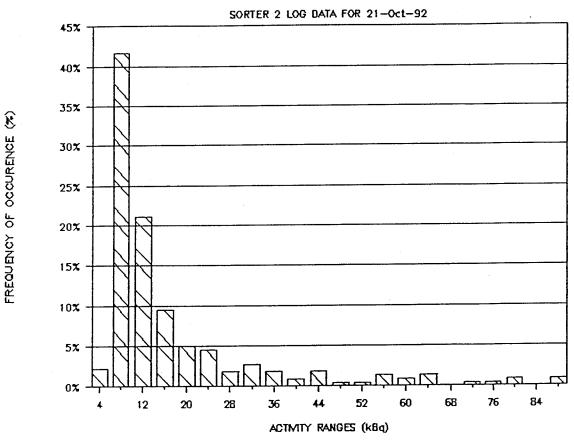


SORTER 2 21-Oct-92			
AVERAGE BACKGROUND COUNT RATE	0.78 ± 0.	.04 c/sec	
	0.8 tons/m³		
SORTER SOIL DENSITY	1.65 tons/m³		
GROUND SOIL DENSITY	1405 (010)	CONTAMINATED	CLEAN
WAGE TOTAL		1.66 tons	38.6 tons
MASS TOTAL  MAXIMUM/SORT		37.3 kg	37.3 kg
MINIMUM/SORT		0.5 kg	31.2 kg
MINIMON/SORT		_	
WEIGHT RECOVERY OR VOLUME RECOVERY			95.9%
EQUIVALENT SOIL-IN-GROUND		1.31 yd <sup>3</sup>	30.6 yd <sup>3</sup> 31.9 yd <sup>3</sup> /day
PARTICLE ACTIVITY (MAXIMUM ESTIMAT	E)	7 510 kpa	
TOTAL		3,519 kBq	
MAXIMUM/SORT		188 kBq	
MINIMUM/SORT		3.6 kBq	
	TIMATEL ACTIVITY	3,758 kBq	(401)kBq
DISPERSED + PARTICLE (REALISTIC ES	IIMAIL) ACTIVITY	98 kBq	11 kBq
MAXIMUM/SORT		-2893 Bq	-13 kBq
MINIMUM/SORT		2,266 Bq/kg	(10)8q/kg
SPECIFIC ACTIVITY		cicoo adi ka	, ,
WORK DAY			
WORK DAY START	07:00 AM		
PROCESSING START	07:42 AM		
PLANT STARTUP TIME		0.70 hr	
PROCESSING END	04:51 PM		
WORK DAY END	05:30 PM		
PLANT SHUTDOWN TIME		0.65 hr	
LUNCH PERIOD		0.5 hr	
WORK HOURS		10.0 hr	
MAX PROCESS HOURS (END-STAR	T)	9.15 hr	
ACTUAL PROCESS HOURS (TOTAL		6.00 hr	
TOTAL SYSTEM PAUSE TIME	20 000 0000 (200000)	1.33 hr	
TOTAL DOWNTIME (MAX-ACTUAL)		3.15 hr	
TIME UTILIZATION (ACTUAL HR	S/WORK HRS)	60.0%	
TOTAL SOIL PROCESSING RECORDS (2-S	EC and 20-SEC)	1,303	
NOMPROCESS RECORDS (Test, calibrat	ion, etc)	10	
20-SEC PROCESS RECORDS		1,080	
		7 MD>0 & MND=0	
TOTAL SORT		103 AD=0 & MD=0 &	MND>0
NO SORT		975 AD>0&0 <md<mnd< td=""><td></td></md<mnd<>	
SOME SORT	s	(5)	
UNEXPLAINED RECORDS	146	<b>\-</b> •	
0 <ad<1kbq &="" md="">0 AD=0 &amp; (</ad<1kbq>			
AD<0 & 1			
W ( & (	1 ·		

2	-SEC CC	UNT PERIODS				10,800				
		2-SEC RECORD	S WITH S	ORTS			AP>0			
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 D	ETECTOR				
			DETECTO	RS	52		80.0%			
			DETECTO		11		16.9%			
			DETECTO		2		3.1%			
			DETECTO		0		0.0%			
	•		DETECTO		0		0.0%			
			DETECTO		0		0.0%			
			DETECTO		0		0.0%			
			OTAL		•	65	••••			
		•	J.M.E							
		NET 2-SEC RE				158				
		2-SEC PERIOD			•	10,642				
		AVG TIME BET	WEEN 2-S	EC SORTS		136.7	sec			
1-GATE S	ORTS	119	ACT_ND	NUMBER	SPEC_A		ACT_F	SORT	FREQX	ACT_P
DETECTO	SORTS		(Bq)		(Bq/kg)		 (pg)			(kBq)
					•					
1	9	7.6%	-14000	0	-375		4000	5	2.2%	4
2	12	10.1%	-12000	2	-322		8000	93	41.7%	8
3	22	18.5%	-10000	4	-268		12000	47	21.1%	12
4	19	16.0%	-8000	12	-214		16000	21	9.4%	16
5	20	16.8%	-6000	28	-161		20000	11	4.9%	20
6	21	17.6%	-4000	77	-107		24000	10	4.5%	24
7	11	9.2%	-2000	197	-54		28000	4	1.8%	28
8	. 5	4.2%	0	<b>28</b> 6	0		32000	6	2.7%	32
TOTAL	119		2000	246	54		36000	4	1.8%	36
			4000	142	107		40000	2	0.9%	40
2-GATE SC	ORTS	104	6000	<b>6</b> 6	161		44000	4	1.8%	44
DETECTO	SORTS	FREQ%	8000	23	214		48000	1	0.4%	48
8			10000	6	268		52000	1	0.4%	52
9	9	8.7%	12000	1	322		56000	3	1.3%	56
10	11	10.6%	14000	0	375		60000	2	0.9%	60
11	24	23.1%	16000	0	429		64000	3	1.3%	64
12	22	21.2%	18000	0	483		68000	0	0.0%	68
13	21	20.2%	20000	0	536		72000	1	0.4%	72
14	15	14.4%	22000	0	590		76000	1	0.4%	76
15	2	1.9%	24000	0	643		80000	2	0.9%	80
TOTAL	104		26000	0	697		84000	0	0.0%	84
			>28000	0	0		>84000	2	0.9%	>84
			TOTAL	1090			TOTAL	223		
HP		225		ATE1	223					
MP		2787	(	SATE2	104					
DI	SE	539								

REC CODE EXPLANATION





AUTORACE PACKCRONIND COUNT RATE 0.75 ± 0.05 c/sec	
AVERAGE BACKGROUND COUNT RATE	
SORTER SUIL DENSITY	
GROUND SOIL DENSITY 1.65 CONSAMINATED CLEAN	
0.53 tons 35.9 tons	
MASS TOTAL 7.3 kg 37.3 kg	
MAXIMUM/SORT	
MINIMUM/SORT U.5 kg 33.1 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY	13. <i>d</i> d
EQUIVALENT SOIL-IN-GROUND  0.42 yd3  28.5 yd3  28.9 yd3	1-/day
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)	
TOTAL 8,104 kBq	
MAXIMUM/SORT 204 kBq	
MINIMUM/SORT 3.5 kBq	
3,222 kBq (1,594)kBq	
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  109 kBg 12 kBg	
MAXIMON/SOKT D. R.g16 kBq	
MINIMOM/SORT	
SPECIFIC ACTIVITY 6,007 BQ/Kg	
WORK DAY	
WORK DAY START 07:00 AM	
PROCESSING START 10:01 AM	
PLANT STARTUP TIME 3.03 hr	
PROCESSING END 04:43 PM	
WORK DAY END 05:30 PM	
PLANT SHUTDOWN TIME 0.78 hr	
0.5 hr	
LUNCH PERIOD 10.0 hr	
Work Hours	
MAX PROCESS HOURS (END-START)	
ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT TERTOSO)	
TOTAL SYSTEM PAUSE TIME	
TOTAL DOWNTING (MAX-ACTORE)	
TIME UTILIZATION (ACTUAL HRS/WORK HRS) 54.2%	
TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 1,488	
NONPROCESS RECORDS (Test, calibration, etc) 35	
NORPHOEESS RECORDS (VEST) SEVERILLE AND A SEVE	
20-SEC PROCESS RECORDS 977	
TOTAL SORT 0 MD>0 & MND=0	
NO SORT 457 AD=0 & MD=0 & MND>0	
SOME SORT 520 AD>0&0 <md<mndmax&mnd<mndmax< td=""><td></td></md<mndmax&mnd<mndmax<>	
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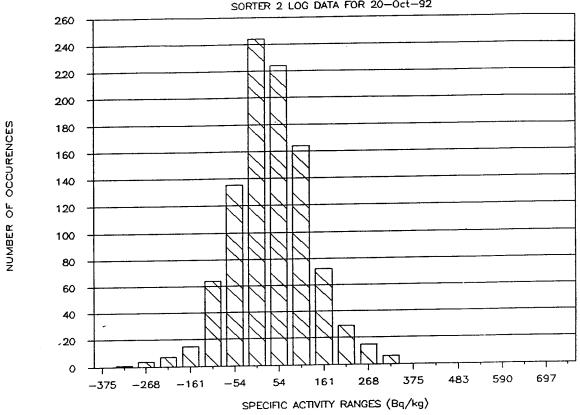
9,770

2	- SEC CO	JNI PEKTUDS				9,110					
		2-SEC RECORD					AP>0				
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR					
		2	DETECTO	RS	117		81.3%				
		3	DETECTO	RS	25		17.4%				
		4	DETECTO	RS	2		1.4%				
		5	DETECTO	RS	0		0.0%				
		6	DETECTO	RS	0		0.0%				
		7	DETECTO	RS	0		0.0%				
		8	DETECTO	RS	0		0.0%				
		T	OTAL			144					
		NET 2-SEC RE	CORDS WI	TH SORTS	•	367	•				
		2-SEC PERIOD	S WITH N	O SORTS		9,403					
		AVG TIME BET	WEEN 2-S	EC SORTS		53.2	sec				
									2007	50508	ACT D
1-GATE SO		253	ACT_ND		SPEC_A		,	ACT_P		FREQ%	ACT_P
DETECTO	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)
1	5	2.0%	-14000	5	-375			4000	10	1.9%	4
2	19	7.5%	-12000	15				8000	210	40.9%	8
3	37	14.6%	-10000	15	-268			12000	104	20.2%	12
4	50	19.8%	-8000	20				16000	54	10.5%	16
5	43	17.0%	-6000	71	-161			20000	38	7.4%	20
6	37	14.6%	-4000	136	-107			24000	23	4.5%	24
7	45	17.8%	-2000	205	-54		:	28000	14	2.7%	28
8	17	6.7%	0	249	0			32000	10	1.9%	32
TOTAL	253	-	2000	153	54			36000	13	2.5%	36
			4000	66	107			40000	5	1.0%	40
2-GATE SO	ORTS	258	6000	37	161			44000	4	0.8%	44
DETECTO	SORTS	FREQ%	8000	18	214			48000	1	0.2%	48
8			10000	11	268		9	52000	5	1.0%	52
9	11	4.2%	12000	6	322			56000	3	0.6%	56
10	31	11.9%	14000	3	375		. (	60000	1	0.2%	60
11	50	19.2%	16000	0	429			64000	4	0.8%	64
12	49	18.8%	18000	0	483			68000	1	0.2%	68
13	46	17.6%	20000	0	536			72000	2	0.4%	72
14	47	18.0%	22000	0				76000	0	0.0%	76
15	27	10.3%	24000	0	643			80000	0	0.0%	80
TOTAL	261		26000	0	697			84000	1	0.2%	84
TOTAL	201		>28000	0	0			84000	11	2.1%	>84
			TOTAL	1010				TOTAL	514		
HF	PΕ	504	(	GATE1	511						
MF	PE .	626	(	GATE2	258						•
D1	SE	0									

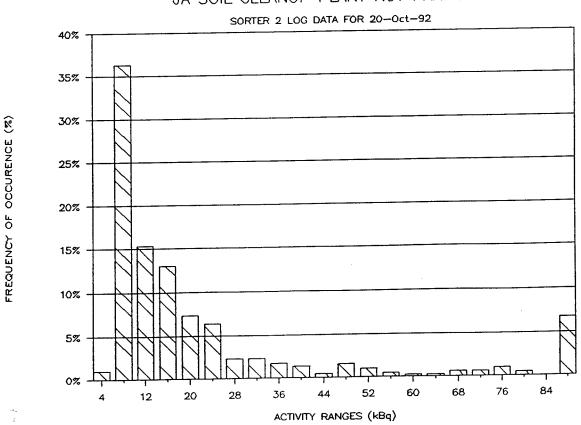
REC CODE EXPLANATION

2-SEC COUNT PERIODS

SORTER 2 LOG DATA FOR 20-Oct-92



# JA SOIL CLEANUP PLANT HOT PARTICLES



A-612

SORTER 1	19-0ct-92		-					
AVERAGE BACKGRO	UND COUNT RATE		0.76	± 0.0	05 c/sec			
SORTER SOIL DEN			1.1	tons/m³				
GROUND SOIL DEN	SITY		1.65	tons/m³				
					CONTAMINATED	)	CLEAN	
MASS TOTAL					0.91 tons		62.6 tons	
MAXIMUM/	SORT				53.8 kg		51.2 kg	
MINIMUM/	SORT				0.6 kg		42.9 kg	
WEIGHT RECOVERY	OR VOLUME RECOVER	ſ						98.6%
EQUIVALENT SOIL	- I N - GROUND				0.72 yd³		49.6 yd3	50.3 yd3/day
PARTICLE ACTIVE	TY (MAXIMUM ESTIMA	ſΕ)						
TOTAL					30,417 kBq			
MAXIMUM/	SORT				2,161 kBq			
MINIMUM/	SORT				2.9 kBq			
nispersen + PAR	TICLE (REALISTIC ES	STIMATE) ACTIV	'ITY		9,544 kBq		(1,955)kBq	
MAXIMUM/		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			1253 kBq		13 kBq	
MINIMUM/					-5139 Bq		-12 kBq	
	ACTIVITY				10,464 Bq/kg	ï	(31)Bq/kg	
WORK DAY								
WORK DAY	START	07:00 AM						
PROCESS11	NG START	08:02 AM						
PLANT STA	ARTUP TIME				1.	04 hr		
PROCESSII	NG END	05:15 PM						
WORK DAY	END	05:30 PM						
PLANT SH	JTDOWN TIME				0.	24 hr		
LUNCH PE	R100				0	.5 hr		
WORK HOU	RS				10	.0 hr		
MAX PROCE	ESS HOURS (END-STAF	(T)			9.	23 hr		
ACTUAL P	ROCESS HOURS (TOTAL	20-SEC SORT	PER IODS	S)	6.	88 hr		
TOTAL SYS	STEM PAUSE TIME				1.	16 hr		
TOTAL DO	INTIME (MAX-ACTUAL)	•				34 hr		
TIME UTII	IZATION (ACTUAL HR	S/WORK HRS)			68	.8%		
TOTAL SOIL PROCE	ESSING RECORDS (2-S	SEC and 20-SEC	)		2,164			
NONPROCESS RECOR	RDS (Test, calibrat	ion, etc)			36			
20-SEC PR	ROCESS RECORDS				1,239			
	TOTAL SORT					& MND=0		
	NO SORT				726 AD=0	& MD=0 &	MND>0	
	SOME SORT				511 AD>0&	O <md<mnd< td=""><td>max&amp;MND<mndmax< td=""><td></td></mndmax<></td></md<mnd<>	max&MND <mndmax< td=""><td></td></mndmax<>	

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UNEXPLAINED RECORDS

0<AD<1kBq & MD>0

AD=0 & MD

AD<0 & MD

0

0

2.	-SEC CO	UNT PERIODS			-	12,390				
_	520 00	2-SEC RECORD	S WITH S	ORTS			AP>0			
		2-SEC RECORD			IN >1 DE	TECTOR				
			DETECTO		241		74.6%			
		3	DETECTO	RS	61		18.9%			
			DETECTO		17		5.3%			
		5	DETECTO	RS	4		1.2%			
•		6	DETECTO	RS	0		0.0%			
		7	DETECTO	RS	0		0.0%			
		8	DETECTO	RS	0		0.0%			
		ī	OTAL			323				
		NET 2-SEC RE	CORDS WI	TH SORTS		602				
		2-SEC PERIOD	S WITH N	O SORTS		11,788				
	•	AVG TIME BET	WEEN 2-S	EC SORTS		41.2	sec			
1-GATE SO	note	469	ACT_ND	NUMBER	SPEC A		ACT_P	SORT	FREQ%	ACT_P
DETECTO	SORTS		(Bq)		(Bq/kg)		(Bq)	(#)		(kBq)
DETECTO	30013	1 1122 -11	, - <b>,</b> ,	•						
1	20	4.3%	-14000	0	-273		4000	25	2.7%	4
2	60	12.8%	-12000	3	-234		8000	331	35.7%	8
3	79	16.8%	-10000	13	-195		12000	148	16.0%	12
4	94	20.0%	-8000	31	-156		16000	99	10.7%	16
5	61	13.0%	-6000	100	-117		20000	58	6.3%	20
6	64	13.6%	-4000	164	-78		24000	42	4.5%	24
7	61	13.0%	-2000	279	-39		28000	38	4.1%	28
8	30	6.4%	0	310	0		32000	26	2.8%	32
TOTAL	469		2000	197	39		36000	17	1.8%	36
			4000	94	78		40000	16	1.7%	40
2-GATE SC	ORTS	456	6000	40	117		44000	10	1.1%	44
DETECTO	SORTS	FREQ%	8000	16	156		48000	10	1.1%	48
8			10000	14	195		52000	9	1.0%	52
9	46	10.1%	12000	8	234		56000	6	0.6%	56
10	71	15.5%	14000	4	273		60000	6	0.6%	60
11	90	19.7%	16000	0	313		64000	5	0.5%	64
12	79	17.3%	18000	1	352		68000	3	0.3%	68
13	58	12.7%	20000	0	391		72000	6	0.6%	72
14	67		22000	0	430		76000	2	0.2%	76
15	46	10.1%	24000	0	469		80000	1	0.1%	80
TOTAL	457		26000	0	508		84000	4	0.4%	84 >97
			>28000	0	0		>84000	64	6.9%	>84
			TOTAL	1274			TOTAL	926		

REC CODE EXPLANATION

861

402

166

HPE

MPE

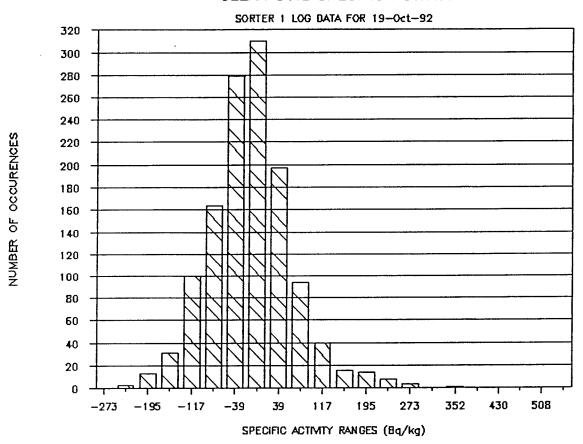
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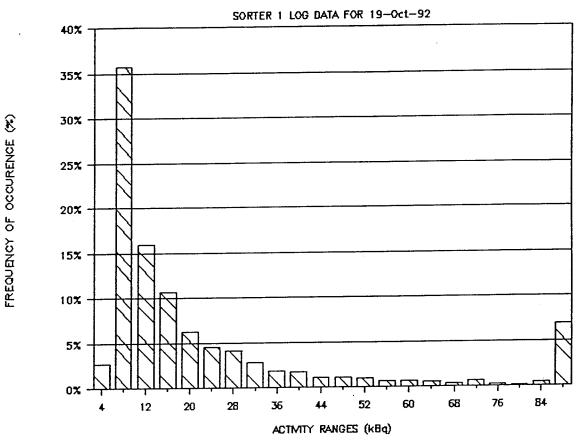
925

456

GATE1

GATE2





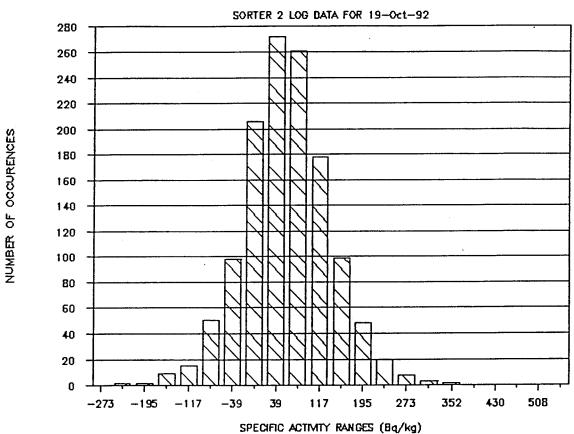
SORTER 2 19-Oct-92	-		
AVERAGE BACKGROUND COUNT RATE	0.79 ± 0	).04 c/sec	
SORTER SOIL DENSITY	1.1 tons/m <sup>3</sup>		
GROUND SOIL DENSITY	1.65 tons/m³		
		CONTAMINATED	CLEAN
MASS TOTAL		1.10 tons	62.4 tons
MAXIMUM/SORT		51.2 kg	51.2 kg
MINIMUM/SORT		0.6 kg	44.8 kg
DECOMP	rny		98.3%
WEIGHT RECOVERY OR VOLUME RECOV	EKI	0.87 yd³	49.4 yd <sup>3</sup> 50.3 yd <sup>3</sup> /day
EQUIVALENT SOIL-IN-GROUND		0.01 70	17.17 /4 30.00 /2 /22/
PARTICLE ACTIVITY (MAXIMUM ESTI	MATE)		
TOTAL		19,450 kBq	
MAXIMUM/SORT		1,332 kBq	
MINIMUM/SORT		3.2 kBq	
DISPERSED + PARTICLE (REALISTIC	ESTIMATE) ACTIVITY	7,261 kBq	2,598 kBq
MAXIMUM/SORT		890 kBq	17 kBq
MINIMUM/SORT		-3326 Bq	-10 kBq
SPECIFIC ACTIVITY		6,616 Bq/kg	42 Bq/kg
WORK DAY			
WORK DAY START	07:00 AM		
PROCESSING START	08:02 AM		
PLANT STARTUP TIME		1.03 hr	
PROCESSING END	05:16 PM		
WORK DAY END	05:30 PM		
PLANT SHUTDOWN TIME		0.24 hr	•
LUNCH PERIOD		0.5 hr	
WORK HOURS		10.0 hr	
MAX PROCESS HOURS (END-S		9.24 hr	
ACTUAL PROCESS HOURS (TO	TAL 20-SEC SORT PERIODS)	6.88 hr	
TOTAL SYSTEM PAUSE TIME		1.16 hr	
TOTAL DOWNTIME (MAX-ACTU		2.35 hr	
TIME UTILIZATION (ACTUAL	HRS/WORK HRS)	68.8%	
TOTAL SOIL PROCESSING RECORDS (	2-SEC and 20-SEC)	2,103	
NONPROCESS RECORDS (Test, calib	ration, etc)	37	
20-SEC PROCESS RECORDS		1,239	
TOTAL SORT		3 MD>0 & MND=0	
NO SORT		592 AD=0 & MD=0	
SOME SORT		645 AD>0&0 <md<mn< td=""><td></td></md<mn<>	
UNEXPLAINED REC	ORDS	(1)	
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•	& MD 0		
	& MD 1		
•			

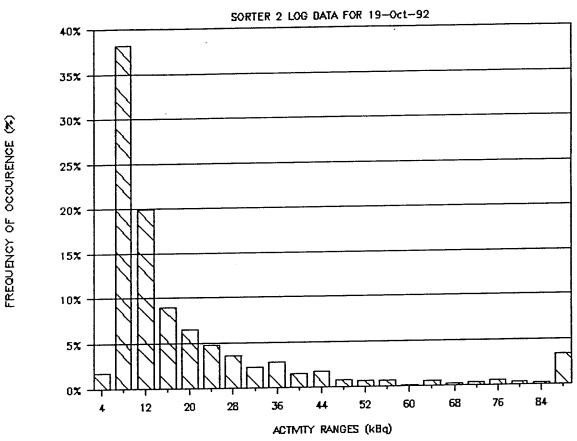
2.	-SEC CO	JNT PERIODS			-	12,390				
•	020 00	2-SEC RECORD	S WITH S	ORTS		864	AP>0			
		2-SEC RECORD			IN >1 DE	TECTOR				
			DETECTO		218		80.4%			
			DETECTO		45		16.6%			
			DETECTO		7		2.6%			
			DETECTO		1		0.4%			
			DETECTO		0		0.0%			
			DETECTO		0		0.0%			
			DETECTO		0		0.0%			
		Т	OTAL			271				
		NET 2-SEC RE				593				
		2-SEC PERIOD				11,797				
		AVG TIME BET	WEEN 2-S	EC SORTS		41.8	sec			
1-GATE SC	חסדפ	451	ACT_ND	NUMBER	SPEC_A		ACT_	P SORT	FREQ%	ACT_P
DETECTO	SORTS	FREQ%	(Bq)		(Bq/kg)		(Bo	-  ) (#)		(kBq)
DETECTO	30013	, KL4%	(54)							
1	21	4.7%	-14000	0	-273		400	0 15	1.7%	4
2	58	12.9%	-12000	2	-234		800	0 331	38.2%	8
3	86	19.1%	-10000	2	-195		1200	0 173	20.0%	12
4	98	21.7%	-8000	9	-156		1600	0 78	9.0%	16
5	77	17.1%	-6000	15	-117		2000	0 56	6.5%	20
6	54	12.0%	-4000	51	-78		2400	0 41	4.7%	24
7	42	9.3%	-2000	98	-39		2800	0 31	3.6%	28
8	15	3.3%	0	206	0		3200	0 20	2.3%	32
TOTAL	451		2000	272	39		3600	0 24		36
			4000	261	78		4000			40
2-GATE SO	ORTS	413	6000	178	117		4400			44
DETECTO	SORTS	FREQ%	8000	99	156		4800			48
8			10000	48	195		5200			52
9	47	11.3%	12000	20	234		5600			56
10	56	13.5%	14000	8	273		6000			60
11	84	20.2%	16000	3	313		6400			64
12	77	18.6%	18000	2	352		6800			68
13	73	17.6%	20000	0	391		7200	0 3		72
14	57	13.7%	22000	0	430		7600			76
15	21	5.1%	24000	0	469		8000			80
TOTAL	415		26000	0	508		8400			84
			>28000	0	0		>8400		3.3%	>84
			TOTAL	1274			TOTA	.t 866		
	>F	970		CATEI	864					
	PE NE	830		GATE1	413					
MF	'E	661	'	GATE2	413					

REC CODE EXPLANATION

234

DISE



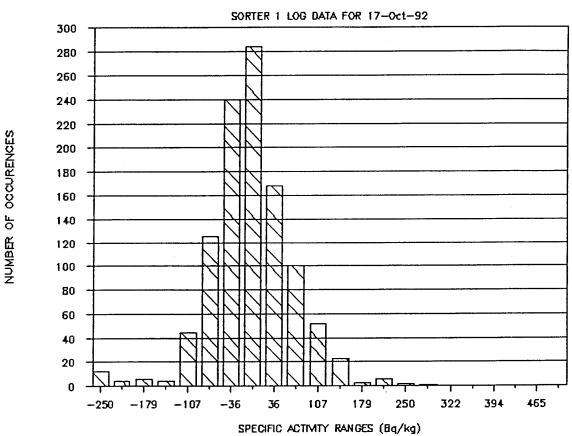


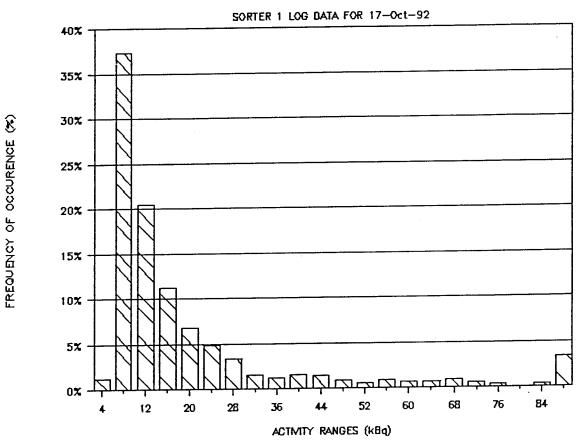
SORTER 1 17-Oct-92	-			
AVERAGE BACKGROUND COUNT RATE	0.73 ± 0	.05 c/sec		
SORTER SOIL DENSITY	1.15 tons/m <sup>3</sup>			
GROUND SOIL DENSITY	1.65 tons/m³			
		CONTAMINATED	CLEAN	
MASS TOTAL		0.54 tons	54.4 tons	
MAXIMUM/SORT .		6.4 kg	55.9 kg	
MINIMUM/SORT		0.6 kg	44.8 kg	
WEIGHT RECOVERY OR VOLUME RECOVERY				99.0%
EQUIVALENT SOIL-IN-GROUND		0.42 yd³	43.1 yd³	43.5 yd3/day
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)				
TOTAL	•	11,773 kBq		
MAXIMUM/SORT		699 kBq		
MINIMUM/SORT		3.5 kBq		
DISPERSED + PARTICLE (REALISTIC ESTIMA	TE) ACTIVITY	3,866 kBq	(968)kBq	
MAXIMUM/SORT		442 kBq	15 kBq	
MINIMUM/SORT		0 Bq	-12 kBq	
SPECIFIC ACTIVITY		7,211 Bq/kg	(18)Bq/kg	
WORK DAY				
WORK DAY START 07	:00 AM			
PROCESSING START 09	:19 AM			
PLANT STARTUP TIME		2.32 hr		
PROCESSING END 04:	:40 PM			
WORK DAY END 05	:30 PM			
PLANT SHUTDOWN TIME		0.83 hr		
LUNCH PERIOD		0.5 hr		
WORK HOURS		10.0 hr		
MAX PROCESS HOURS (END-START)		7.36 hr		
ACTUAL PROCESS HOURS (TOTAL 20-5	SEC SORT PERIODS)	5.80 hr		
TOTAL SYSTEM PAUSE TIME		0.02 hr		
TOTAL DOWNTIME (MAX-ACTUAL)		1.56 hr	•	
TIME UTILIZATION (ACTUAL HRS/WOR	RK HRS)	58.0%		
TOTAL SOIL PROCESSING RECORDS (2-SEC ar	nd 20-SEC)	1,614		
NONPROCESS RECORDS (Test, calibration,	etc)	30		
20-SEC PROCESS RECORDS		1,044		
TOTAL SORT		0 MD>0 & MND=	0	
NO SORT		700 AD=0 & MD=0	& MND>0	
SOME SORT		344 AD>0&0 <md<m< td=""><td>NDmax&amp;MND&lt;</td><td></td></md<m<>	NDmax&MND<	
UNEXPLAINED RECORDS		0		
0 <ad<1kbq &="" md="">0</ad<1kbq>	1			
AD=0 & MD	0			
AD - 8 O > DA	0			

A-621

2.	-SEC CO	UNT PERIODS			-	10,440					
_	520 00	2-SEC RECORD	S WITH S	ORTS		570	AP>0				
		2-SEC RECORD			IN >1 DE	ETECTOR					
			DETECTO		138		80.2%				
			DETECTO		28		16.3%				
			DETECTO		6		3.5%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
			OTAL	λ3	J	172					
		,	UIAL								
		NET 2-SEC RE	CORDS WI	TH SORTS		398					
		2-SEC-PERIOD	S WITH N	SORTS		10,042					
		AVG TIME BET	WEEN 2-SI	EC SORTS		52.5	sec				
		207	ACT NO	NUMBER	SPEC_A			CT_P	SORT	FREQ%	ACT_P
1-GATE S		293	ACT_ND		(Bq/kg)		•	(Bq)	(#)		(kBq)
DETECTO	SORTS	FREQ%	(Bq)	(#)	(bq) kg)			(-4)			•
1	6	2.0%	-14000	12	-250			4000	. 7	1.2%	4
2	34	11.5%	-12000	4	-215			8000	214	37.3%	8
3	54		-10000	6	-179		1	2000	117	20.4%	12
4	55	18.6%	-8000	4	-143		1	6000	64	11.2%	16
5	58		-6000	45	-107		2	0000	39	6.8%	20
6	34	11.5%	-4000	125	-72		2	4000	28	4.9%	24
7	37		-2000	240	-36		2	8000	19	3.3%	28
8	17		0	284	0		3	2000	9	1.6%	32
TOTAL	295	3.0%	2000	168	36		3	6000	7	1.2%	36
IUIAL	273		4000	100	72			0000	9	1.6%	40
2-GATE S	no T C	277	6000	52	107		4	4000	8	1.4%	44
DETECTO	SORTS		8000	23	143		4	8000	5	0.9%	48
8	SURTS	INCER	10000	3	179			2000	3	0.5%	52
9	17	6.1%	12000	6	215			6000	- 5	0.9%	56
10	43		14000	2	250			0000	4	0.7%	60
11	56		16000	1	286			4000	4	0.7%	64
12	46		18000	0	322			8000	5	0.9%	68
13	51	18.3%	20000	0	358		7	2000	3	0.5%	72
14	33		22000	0	394			6000	2	0.3%	76
15	32		24000	0	429		8	0000	0	0.0%	80
TOTAL	278		26000	0	465			4000	2	0.3%	84
IUIAL	210		>28000	0	0			4000	19	3.3%	>84
			TOTAL	1075	·			OTAL	573		
			IVIAL	,,,,							
н	PE	548	•	GATE1	570						
M	PE	285	(	GATE2	277						
D	ISE	0									

REC CODE EXPLANATION

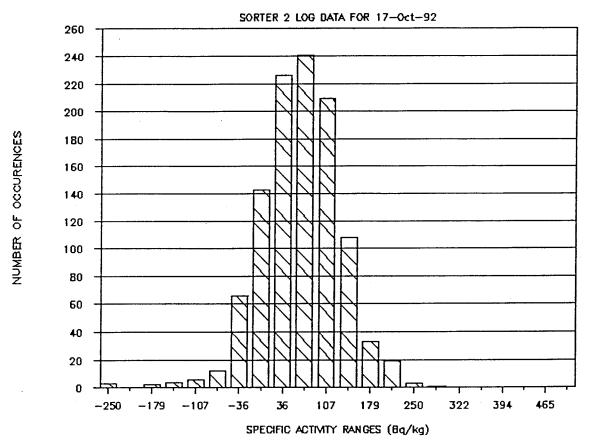


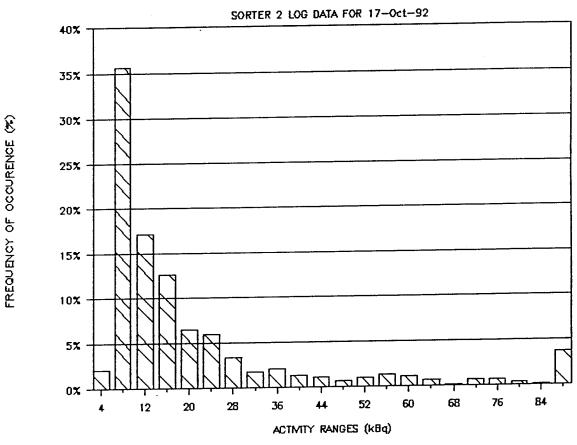


SORTER 2 17-Oct-92	-		
AVERAGE BACKGROUND COUNT RATE	0.76 ±	0.04 c/sec	
SORTER SOIL DENSITY	1.15 tons/m <sup>3</sup>	•	
GROUND SOIL DENSITY	1.65 tons/m <sup>3</sup>		
andone sore sensiti	•	CONTAMINATED	CLEAN
MASS TOTAL		0.68 tons	54.7 tons
MAXIMUM/SORT		6.4 kg	55.9 kg
MINIMUM/SORT		0.6 kg	44.8 kg
WEIGHT RECOVERY OR VOLUME RECOVER	Υ		98.8%
EQUIVALENT SOIL-IN-GROUND		0.54 yd3	43.4 yd³ 43.9 yd³/day
PARTICLE ACTIVITY (MAXIMUM ESTIMA	TE)		
TOTAL	,	14,176 kBq	
MAXIMUM/SORT		605 kBq	
MINIMUM/SORT		3.3 kBq	
DISPERSED + PARTICLE (REALISTIC E	STIMATE) ACTIVITY	5,422 kBq	2,872 kBq
MAXIMUM/SORT	STIMILY ACTIVITY	467 k8q	14 kBg
MINIMUM/SORT		0 Bq	-10 kBq
SPECIFIC ACTIVITY		7,936 Bq/kg	52 Bq/kg
SPECIFIC ACTIVITY		. <b>/</b> /20 54 Kg	51 CQ 13
WORK DAY			
WORK DAY START	07:00 AM		
PROCESSING START	09:19 AM		
PLANT STARTUP TIME		2.32 hr	
PROCESSING END	04:45 PM		
WORK DAY END	05:30 PM		
PLANT SHUTDOWN TIME		0.75 hr	
LUNCH PERIOD		0.5 hr	
WORK HOURS		10.0 hr	
MAX PROCESS HOURS (END-STAI	RT)	7.43 hr	
ACTUAL PROCESS HOURS (TOTAL	L 20-SEC SORT PERIODS)	5.86 hr	
TOTAL SYSTEM PAUSE TIME		0.00 hr	
TOTAL DOWNTIME (MAX-ACTUAL)	)	1.58 hr	
TIME UTILIZATION (ACTUAL H	RS/WORK HRS)	58.5%	
TOTAL SOIL PROCESSING RECORDS (2-5	SEC and 20-SEC)	1,672	
NONPROCESS RECORDS (Test, calibrat	tion, etc)	22	•
20-SEC PROCESS RECORDS		1,054	
TOTAL SORT		0 MD>0 & MND=0	
NO SORT		578 AD=0 & MD=0	& MND>0
SOME SORT		476 AD>0&0 <md<mn< td=""><td>Dmax&amp;MND<mndmax< td=""></mndmax<></td></md<mn<>	Dmax&MND <mndmax< td=""></mndmax<>
UNEXPLAINED RECORD	)S	0	
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AD=0 &	MD 0		
AD<0 &	MD 0		

2	-SEC CO	UNT PERIODS			-	10,540				
-		2-SEC RECORD	S WITH S	ORTS		618	AP>0			
		2-SEC RECORD			IN >1 DE	ETECTOR				
			DETECTO		164		77.7%			
			DETECTO		38		18.0%			
			DETECTO		7		3.3%			
			DETECTO		2		0.9%			
			DETECTO		0		0.0%			
			DETECTO		0		0.0%			
			DETECTO		0		0.0%			
			OTAL			-211				
		•								
		NET 2-SEC RE	CORDS WI	TH SORTS		407				
		2-SEC PERIOD	S WITH N	o sorts		10,133				•
		AVG TIME BET	WEEN 2-S	EC SORTS		51.8	sec			
										467.0
1-GATE S	ORTS	329	ACT_ND		SPEC_A		ACT	-	T FREQ%	ACT_P
DETECTO	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(E	lq) (#	)	(kBq)
				_	250		,,	100 1	3 2.1%	4
1	10		-14000	3	-250					
2	42		-12000	0						
3	66		-10000	2			120			
4	63		-8000	4	-143		160			
5	52		-6000	6	-107		200			
6	52		-4000	12	-72		240			
7	<b>3</b> 5		-2000	66	-36		280			
8	9		0	143	0		320			
TOTAL	329		2000	226	36		360			
			4000	241	72		400		8 1.3%	
2-GATE S	ORTS	289	6000	209	107		440	•	7 1.1%	
DETECTO	SORTS	FREQ%	8000	108			480		4 0.6%	
8			10000	33	179		520		6 1.0%	
9	27		12000	19	215		560		8 1.3% 7 1.1%	
10	44	15.2%	14000	3	250		600			
11	71	24.6%	16000	1	286		640		4 0.6%	
12	51	17.6%	18000	0	322		680		1 0.2%	
13	42	14.5%	20000	0	358		720		4 0.6%	
14	45		22000	0	394		760		4 0.6%	
15	9	3.1%	24000	0	429		800		2 0.3%	
TOTAL	289		26000	0	465		840		1 0.2%	
			>28000	0	0		>840			>84
			TOTAL	1076			TOT	AL 618	5	
***	<b>)</b>	582		GATE1	618					
	PE NE	562 478		GATE2	289					
MF		0	,	unit	207					_
Di	I SE	U								·

REC CODE EXPLANATION





SORTER 1 15-Oct-92				
AVERAGE BACKGROUND COUNT RATE	0.74	. ±	0.05 c/sec	
SORTER SOIL DENSITY		tons/m	•	
GROUND SOIL DENSITY		tons/m		
			CONTAMINATED	CLEAN
MASS TOTAL			0.15 tons	23.1 tons
MAXIMUM/SORT			4 kg	53.6 kg
MINIMUM/SORT			0.7 kg	49.5 kg
WEIGHT RECOVERY OR VOLUME RECO	VERY			99.4%
EQUIVALENT SOIL-IN-GROUND			0.12 yd³	18.3 yd³ 18.4 yd³/day
PARTICLE ACTIVITY (MAXIMUM EST	IMATE)			
TOTAL-			3,366 kBq	
MAXIMUM/SORT			273 kBq	
MINIMUM/SORT			3.4 kBq	
DISPERSED + PARTICLE (REALISTI	C ESTIMATEL ACTIVITY		1,126 kBq	(960)kBq
MAXIMUM/SORT	o committee norman		166 kBq	7 kBq
MINIMUM/SORT			0 Bq	-18 kBq
SPECIFIC ACTIVITY			7,483 Bq/kg	(42)Bq/kg
WORK DAY				
WORK DAY START	07:00 AM			
PROCESSING START	02:42 PM			
PLANT STARTUP TIME			7.71 hr	
PROCESSING END	05:06 PM			
WORK DAY END	05:30 PM			
PLANT SHUTDOWN TIME			0.39 hr	
LUNCH PERIOD			0.5 hr	
WORK HOURS			10.0 hr	
MAX PROCESS HOURS (END-	START)		2.40 hr	
ACTUAL PROCESS HOURS (T	OTAL 20-SEC SORT PERIO	DS)	2.41 hr	
TOTAL SYSTEM PAUSE TIME			0.00 hr	
TOTAL DOWNTIME (MAX-ACT	UAL)		-0.00 hr	
TIME UTILIZATION (ACTUA	L HRS/WORK HRS)		24.0%	
TOTAL SOIL PROCESSING RECORDS	(2-SEC and 20-SEC)		590	
NONPROCESS RECORDS (Test, cali	bration, etc)		7	
20-SEC PROCESS RECORDS			433	
TOTAL SORT			0 MD>0 & MND=0	
NO SORT			323 AD=0 & MD=0 &	R MND>0
SOME SORT			110 AD>0&0 <md<mn< td=""><td>Omax&amp;MND<mndmax< td=""></mndmax<></td></md<mn<>	Omax&MND <mndmax< td=""></mndmax<>
UNEXPLAINED REG			0	
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157 AP>0

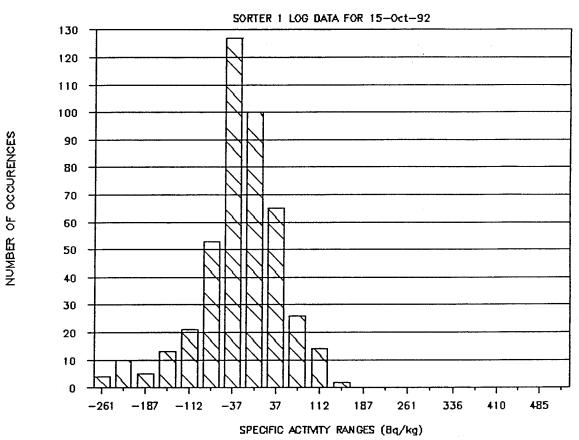
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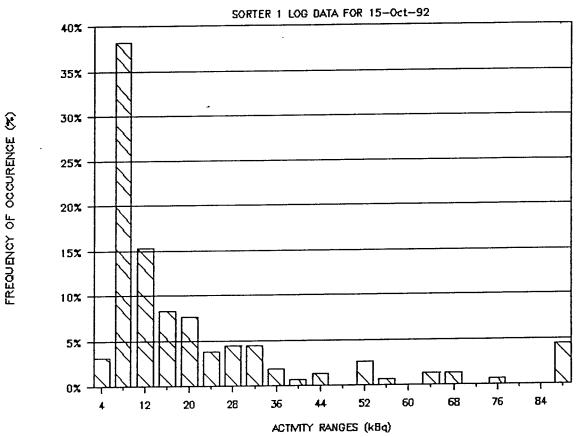
		2-SEC KELUKU				13. 74.0				
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR				
		2	DETECTO	RS	41	83.75	4			
		3	DETECTO	RS	8	16.39	4			
		4	DETECTO	RS	0	0.0	4			
		5	DETECTO	RS	0	0.09	4			
		6	DETECTO	RS	0	0.0	6			
		7	DETECTO	RS	0	0.07	<b>.</b>			
		8	DETECTO	RS	0	0.07	•			
		T	OTAL			49				
		NET 2-SEC RE	CORDS WI	TH SORTS		108				
		2-SEC PERIOD	S WITH N	O SORTS		4,222				
		AVG TIME BET	WEEN 2-S	EC SORTS		80.2 sec				
										407.0
1-GATE SC	RTS	78	ACT_ND		SPEC_A		ACT_P		FREQ%	ACT_P
DETECTO	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(Bq)	(#)		(kBq)
					2/4		(000	5	3.2%	4
1	2	2.6%	-14000	4	-261		4000	60	38.2%	8
2	8	10.3%	-12000	10			8000	24	15.3%	12
3	13	16.7%	-10000	5	-187		12000	13	8.3%	16
4	18	23.1%	-8000	13	-149		16000	12	7.6%	20
5	15	19.2%	-6000	21	-112		20000 24000	6	3.8%	24
6	11	14.1%	-4000	53	-75			7	4.5%	28
7	8	10.3%	-2000	127	-37		28000	7	4.5%	32
8	3	3.8%	0	100	0		32000 36000	3	1.9%	36
TOTAL	78		2000	65	37		40000	1	0.6%	40
			4000	26	75 413		44000	2	1.3%	44
2-GATE SO		79	6000	14	112			0	0.0%	48
DETECTO	SORTS	FREQ%	8000	2	149		48000 52000	4	2.5%	52
8	_		10000	0	187		56000	1	0.6%	56
9	8	10.1%	12000	0	224		60000	0	0.0%	60
10	12	15.2%	14000	0	261		64000	2	1.3%	64
11	14	17.7%	16000	0	299		68000	2	1.3%	68
12	18	22.8%	18000	0	336		72000	0	0.0%	72
13	13	16.5%	20000	0	373		76000	1	0.6%	76
14	8	10.1%	22000	0	410		80000	0	0.0%	80
15	6	7.6%	24000	0	448		84000	0	0.0%	84
TOTAL	79		26000	0	485		>84000	7	4.5%	>84
			>28000	0	0			157	4.5%	704
			TOTAL	440			TOTAL	157		
116	c	157		GATE1	157					
HP Mp		153 72		GATE2	79					
		0	•	un I L C	• • • • • • • • • • • • • • • • • • • •					
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REC CODE EXPLANATION

2-SEC COUNT PERIODS

2-SEC RECORDS WITH SORTS



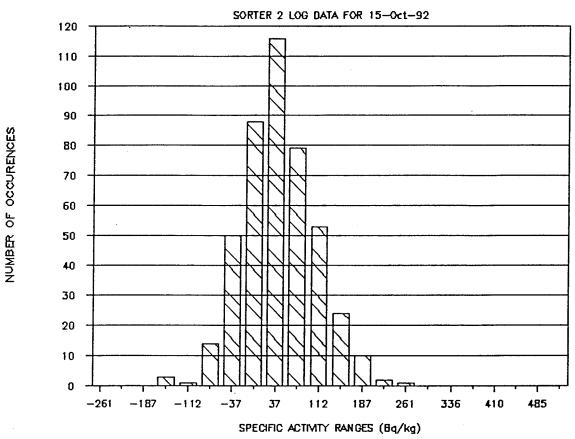


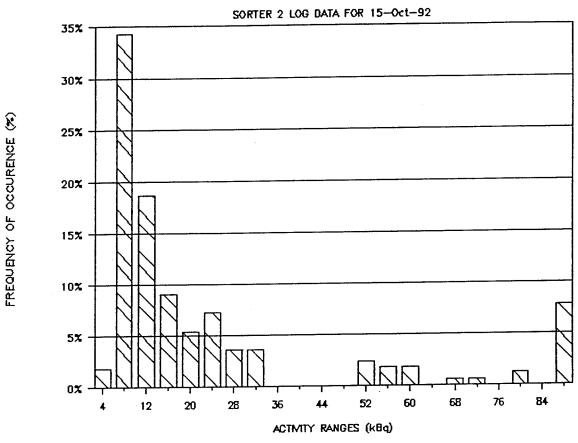
SORTER 2 15-Oct-92			
		05 /	
AVERAGE BACKGROUND COUNT RATE		.05 c/sec	
SORTER SOIL DENSITY	1.15 tons/m <sup>3</sup>		
GROUND SOIL DENSITY	1.65 tons/m <sup>3</sup>	CONTANTNATED	Ct Fall
		CONTAMINATED 0.17 tons	CLEAN 23.3 tons
MASS TOTAL		0.17 tons 6 kg	23.3 tons 53.6 kg
MAXIMUM/SORT		0.7 kg	47.5 kg
MINIMUM/SORT		0.7 kg	47.5 Kg
WEIGHT RECOVERY OR VOLUME RECOVERY			99.3%
EQUIVALENT SOIL-IN-GROUND		0.13 yd <sup>3</sup>	18.5 yd³ 18.6 yd³/day
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)			
TOTAL		4,704 kBq	
MAXIMUM/SORT		318 kBq	
MINIMUM/SORT		3.3 kBq	
DISCEPTION A DARTICLE (DEALISTIC ESTIMATE) A	ACTIVITY	1,639 kBq	595 kBq
DISPERSED + PARTICLE (REALISTIC ESTIMATE) A MAXIMUM/SORT		183 kBq	12 kBq
MINIMUM/SORT		0 Bq	-9 kBq
SPECIFIC ACTIVITY		9,763 Bq/kg	26 Bq/kg
SPECIFIC ACTIVITY		7,103 bdy kg	20 04 43
WORK DAY			
WORK DAY START 07:00 A	M.		
PROCESSING START 02:42 P	*H		
PLANT STARTUP TIME		7.71 hr	
PROCESSING END 05:08 P	PM .		
WORK DAY END 05:30 P	M		
PLANT SHUTDOWN TIME		0.37 hr	
LUNCH PERIOD		0.5 hr	
WORK HOURS		10.0 hr	
MAX PROCESS HOURS (END-START)		2.43 hr	
ACTUAL PROCESS HOURS (TOTAL 20-SEC S	ORT PERIODS)	2.43 hr	
TOTAL SYSTEM PAUSE TIME		0.00 hr	
TOTAL DOWNTIME (MAX-ACTUAL)	<b>C</b> \	-0.01 hr	
TIME UTILIZATION (ACTUAL HRS/WORK HR	5)	24.3%	
TOTAL SOIL PROCESSING RECORDS (2-SEC and 20	-SEC)	604	
NONPROCESS RECORDS (Test, calibration, etc)		3	
•			
20-SEC PROCESS RECORDS		438	
TOTAL SORT		0 MD>0 & MND=0	
NO SORT		321 AD=0 & MD=0 &	
SOME SORT		117 AD>0&0 <md<mndi< td=""><td>nax&amp;MND<mndmax< td=""></mndmax<></td></md<mndi<>	nax&MND <mndmax< td=""></mndmax<>
UNEXPLAINED RECORDS	•	0	
· · · · · · · · · · · · · · · · · · ·	0		
AD=0 & MD	0		

AD<0 & MD 0

;	2-SEC CO	UNT PERIODS			-	4,380				
•		2-SEC RECORD	S WITH S	ORTS		166 AF	·>0		3 1.8x 7 34.3x 1 18.7x 9 .0x 9 5.4x 2 7.2x 6 3.6x 0 0.0x 0 0.0x 0 0.0x 1 .8x 1 .8x 0 0.0x 1 .8x 1 .8x 0 0.0x 1 .8x 1 .8x 0 0.0x 1 .8x 1	
		2-SEC RECORD			IN >1 DE	TECTOR				
			DETECTO		43		.3%			
			DETECTO		8	15	.7%			
			DETECTO		0	(	.0%			
			DETECTO		0	(	.0%			
			DETECTO		0		.0%			
			DETECTO		0		0.0%			
			DETECTO		0		0.0%			
		_	OTAL		-	51				
		'	OTAL							
		NET 2-SEC RE				115				
		2-SEC PERIOD		•	4,265					
•		AVG TIME BET	WEEN 2-S	EC SORTS		76.2 se	ec			
4 6475	COUTE	<b>8</b> 5	ACT ND	NUMBER	SPEC A		ACT_P	SORT	FREQ%	ACT_P
1-GATE :	SORTS		(Bq)		(Bq/kg)		(Bq)	(#)		(kBq)
DETECTO	SUKTS	INCAN	(bq)	()	(-4/3/					
1	5	5.9%	-14000	0	-261		4000	3	1.8%	4
2	15	17.6%	-12000	0	-224		8000	57	34.3%	8
3	14	16.5%	-10000	0	-187		12000	31	18.7%	12
4	13	15.3%	-8000	3	-149		16000	15	9.0%	16
5	13		-6000	1	-112		20000	9	5.4%	20
6	12		-4000	14	-75		24000	12	7.2%	24
7	12		-2000	50	-37		28000	6	3.6%	28
8	1	1.2%	0	88	0		32000	6		32
TOTAL	85		2000	116	37		36000	0	0.0%	36
			4000	79	75		40000	0	0.0%	40
2-GATE	SORTS	81	6000	53	112		44000	0	0.0%	44
DETECTO	SORTS	FREQ%	8000	24	149		48000	0	0.0%	48
8			10000	10	187		52000	4	2.4%	52
9	12	14.8%	12000	2	224		56000	3	1.8%	56
10	12		14000	1	261		60000	3	1.8%	60
11	15	18.5%	16000	0	299		64000	0	0.0%	64
12	11	13.6%	18000	0	336		68000	1		68
13	14	17.3%	20000	0	373		72000	1	0.6%	72
14	14		22000	0	410		76000	0	0.0%	76
15	3		24000	0	448		80000	2	1.2%	80
TOTAL	81		26000	0	485		84000	0	0.0%	84
			>28000	0	0		>84000	13	7.8%	>84
			TOTAL	441			TOTAL	166		
					4//					
	HPE	157		GATE1	166					
	4PE	94		GATE2	81					
ι	DISE	0								

REC CODE EXPLANATION





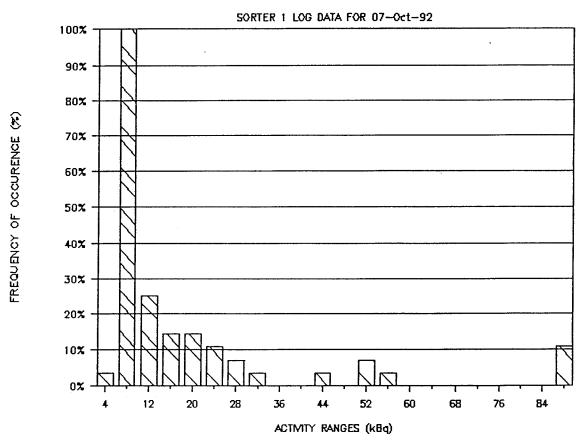
AVERAGE BACKGRUND COUNT RATE  SORTER SOIL DENSITY  1.15 tons/m²  GROUND SOIL DENSITY  1.65 tons/m²  CONTAMINATED	SORTER 1	07-0ct-92		<b>~</b>						
MAXIMAM/SORT   1.65 tons/m²   1.65 tons/m²   1.7 tons   13.7 to	AVERAGE BA	CKGROUND COUNT RATE		0.78	± 0.05	c/sec				
MASS TOTAL  MAXIMAM/SORT  MAXIMAM/SORT  MINIMAM/SORT  MINIMAM/SORT  MINIMAM/SORT  MINIMAM/SORT  MINIMAM/SORT  MINIMAM/SORT  MINIMAM/SORT  MO.05 yd³  MO.05 yd³  MO.09 yd³  MO.09 yd³  MO.9	SORTER SOI	L DENSITY		1.15 to	ons/m³					
MAXIMUM/SORT   MAXIMUM/SORT   2.7 kg   53.6 kg   50.9 kg	GROUND SOI	L DENSITY		1.65 to	ons/m³					
MIXIMM/SORT   2.7 kg   53.6 kg   11.0 kg   50.9 kg   5						CONTAM	INATED	CLEAN		
MINIMAN/SORT 0.7 kg 50.9 kg  MEIGHT RECOVERY OR VOLUME RECOVERY EQUIVALENT SOIL-IN-GROUND 0.05 yd¹ 10.9 yd¹ 10.9 yd¹ day  PARTICLE ACTIVITY (MAXIMAM ESTIMATE)  TOTAL 1,035 kBq MAXIMAN/SORT 127 kBq MINIMAN/SORT 127 kBq MXIMAN/SORT 77 kBq 19 kBq MXIMAN/SORT 10.0 AM MXIMAN/SORT 07:24 AM PRACESSING START 07:24 AM PRACESSING START 07:24 AM MXIMAN MX	MASS TOTAL					0.07	tons	13.7	tons	
MATHEMATICAL   MAXIMAL STIMATE   TOTAL   MAXIMAL STIMATE   MAXIMAL SORT   MAXIMAL MAXIMAL MAXIMAL SORT   MAXIMAL M	MAX	IMUM/SORT				2.7	kg	53.6	kg	
EQUIVALENT SQITIN-GROUND  PARTICLE ACTIVITY (MAXIMUM ESTIMATE)  TOTAL  TOTAL  MAXIMUM/SORT  INIMUM/SORT  MAXIMUM/SORT  MAXIMUM/SORT  MAXIMUM/SORT  MAXIMUM/SORT  SPECIFIC ACTIVITY  MORE DAY  MORE MODES  MORE MODES  MORE MODES  MORE MORES  MORE MORES  MORE MORES  MORE MORES  MORE MORES  MORE MORE  MORE	MIN	IMUM/SORT				0.7	kg	50.9	kg	
EQUIVALENT SQITIN-GROUND  PARTICLE ACTIVITY (MAXIMUM ESTIMATE)  TOTAL  TOTAL  MAXIMUM/SORT  INIMUM/SORT  MAXIMUM/SORT  MAXIMUM/SORT  MAXIMUM/SORT  MAXIMUM/SORT  SPECIFIC ACTIVITY  MORE DAY  MORE MODES  MORE MODES  MORE MODES  MORE MORES  MORE MORES  MORE MORES  MORE MORES  MORE MORES  MORE MORE  MORE	INTICUT DEC	OVERY OR VOLUME RECOVE	o v							00 59
PARTICLE ACTIVITY (MAXIMUM ESTIMATE)  TOTAL  MAXIMUM/SORT  MINIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  MAXIMUM/SORT  MAXIMUM/SORT  MAXIMUM/SORT  TO REAL  MAXIMUM/SORT  MORK DAY  MORK DAY  MORK DAY START  PLANT STARTU  PROCESSING END  0.42 hr  0.42 hr  0.42 hr  0.42 hr  1.42 hr  1.43 hr  1.43 hr  1.43 hr  1010.0 hr  TOTAL SORT   0.00 hr  TOTAL SORT   10 ND>O & MND=O  10 ND=O & MND=O  10			N.I			0.05	vd3	10.0	Vq3	
TOTAL  MAXIMUM/SORT  NINIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  3.7 kBq  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  3.8 kBq  522 kBq  MAXIMUM/SORT  77 kBq  19 kBq  19 kBq  19 kBq  19 kBq  19 kBq  10 Bq  -5 kBq  38 Bq/kg   WORK DAY  WORK DAY START  PROCESSING START  07:24 AM  PLANT STARTUP TIME  PROCESSING END  WORK DAY END  08:50 AM  WORK DAY END  05:30 PM  PLANT SHUTDOWN TIME  LUNCH PERIOD  WORK HOURS  ACTUAL PROCESS HOURS (END-START)  ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS)  10 ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS)  TOTAL SYSTEM PAUSE TIME  0.00 hr  TOTAL SYSTEM PAUSE TIME  0.00 hr  TOTAL SYSTEM PAUSE TIME  0.00 hr  TOTAL SONT  10 MD>0 & MND=0  10 MD=0 & MND	EGOTANTENT	201F-1M-GKOOMD				0.05	<b>7</b> G	10.7	, .	10.7 ya 7aay
TOTAL  MAXIMUM/SORT  NINIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  3.7 kBq  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  3.8 kBq  522 kBq  MAXIMUM/SORT  77 kBq  19 kBq  19 kBq  19 kBq  19 kBq  19 kBq  10 Bq  -5 kBq  38 Bq/kg   WORK DAY  WORK DAY START  PROCESSING START  07:24 AM  PLANT STARTUP TIME  PROCESSING END  WORK DAY END  08:50 AM  WORK DAY END  05:30 PM  PLANT SHUTDOWN TIME  LUNCH PERIOD  WORK HOURS  ACTUAL PROCESS HOURS (END-START)  ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS)  10 ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS)  TOTAL SYSTEM PAUSE TIME  0.00 hr  TOTAL SYSTEM PAUSE TIME  0.00 hr  TOTAL SYSTEM PAUSE TIME  0.00 hr  TOTAL SONT  10 MD>0 & MND=0  10 MD=0 & MND	PARTICLE A	CTIVITY (MAXIMUM ESTIM	ATE)							
MAXIMUM/SORT  MINIMUM/SORT  DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  ASS KBQ  MAXIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MINIMUM/SORT  MORK DAY  MORK DAY  MORK DAY  MORK DAY START  PROCESSING START  O7:00 AM  PROCESSING START  O7:24 AM  PLANT STRATUP TIME  PROCESSING END  OS:30 PM  PLANT SHUTDOWN TIME  LUNCH PERIOD  MORK HOURS  MAX PROCESS HOURS (END-START)  ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS)  TOTAL SYSTEM PAUSE TIME  ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS)  TOTAL SYSTEM PAUSE TIME  O.00 hr  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  Z50  NONPROCESS RECORDS (Test, calibration, etc)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  Z57  TOTAL SORT  NO SORT  TOTAL SORT  O MD>0 & MND=0  NO SORT  SOME SORT  O AD=0 & MD=0 & MND>0  O AD=0 & MD=0 & MD=0 & MND>0  O AD=0 & MD=0 & MND>0  O AD=0 & MD=0 & MD=0 & MND>0  O AD=0 & MD=0 & MND>0  O AD=0 & MD=0 &			·			1,035	kBq			
MINIMUM/SORT   3.7 kBq   522 kBq   MAXIMUM/SORT   77 kBq   19 kB										
DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY  MAXIMUM/SORT  MAXIMUM/SORT  SPECIFIC ACTIVITY   MORK DAY  MORK DAY  MORK DAY  MORK DAY START  PROCESSING START  O7:00 AM  PROCESSING START  O7:24 AM  PLANT STARTUP TIME  PROCESSING END  O8:50 AM  MORK DAY END  O5:30 PM  PLANT SHUTDOMN TIME   LUNCH PERIOD  MORK HOURS  MAX PROCESS HOURS (END-START)  ACTUAL PROCESS HOURS (IND-START)  ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS)  TOTAL SYSTEM PAUSE TIME  O.00 hr  TOTAL SYSTEM PAUSE TIME  O.00 hr  TOTAL SYSTEM PAUSE TIME  O.00 hr  TOTAL SYSTEM PAUSE TIME  O.01 hr  TOTAL SYSTEM PAUSE TIME  O.00 hr  TOTAL SYSTEM PAUSE TIME  O.01 hr  TOTAL SYSTEM PAUSE TIME  O.00 hr  TOTAL SYSTEM							•			
MAXIMUM/SORT 17 kBq 19 kBq  MINIMUM/SORT 5,635 Bq/kg 38 Bq/kg  MORK DAY  MORK DAY  MORK DAY START 07:00 AM  PROCESSING START 07:24 AM  PLANT STARTUP TIME 0.42 hr  PROCESSING END 05:30 PM  MORK DAY END 05:30 PM  PLANT SHUTDOWN TIME 8.67 hr  LUNCH PERIOO 0.5 hr  MORK HOURS 10.0 hr  ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIOOS) 1.43 hr  TOTAL SYSTEM PAUSE TIME 0.000 hr  TOTAL SYSTEM PAUSE TIME 0.000 hr  TOTAL DOWNTIME (MAX-ACTUAL) -0.01 hr  TIME UTILIZATION (ACTUAL HRS/MORK HRS) 14.3%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 250  NONPROCESS RECORDS (Test, calibration, etc) 10  20-SEC PROCESS RECORDS (2-SEC and 20-SEC) 257  TOTAL SORT 0 MD>0 & MND=0  NO SORT 193 AD=0 & MD=0 & MND=0  AD=0 & MD> 0  AD=0 & MD> 0  AD=0 & MD> 0  AD=0 & MD> 0							•			
MINIMUM/SORT SPECIFIC ACTIVITY 5,635 Bq/kg 38 Bq/kg  WORK DAY  WORK DAY START 07:00 AH  PROCESSING START 07:24 AM  PLANT STARTUP TIME 0.42 hr  PROCESSING END 08:50 AM  WORK DAY END 05:30 PM  PLANT SHUTDOWN TIME 8.67 hr  LUNCH PERIOO 0.5 hr  MORK HOURS 10.0 hr  AACTUAL PROCESS HOURS (END-START) 1.42 hr  ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIOOS) 1.43 hr  TOTAL SYSTEM PAUSE TIME 0.00 hr  TOTAL SYSTEM PAUSE TIME 0.00 hr  TIME UTILIZATION (ACTUAL HRS/WORK HRS) 14.3%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 250  NONPROCESS RECORDS (Test, calibration, etc) 10  20-SEC PROCESS RECORDS (2-SEC and 20-SEC) 257  TOTAL SOIT 0 MD>0 & MND=0  NO SORT 0 MD>0 & MND=0  AD=0 & MD>0 & MD=0 & MND=0  AD=0 & MD=0 & MD=0 & MD=0 & MD=0  AD=0 & MD=0 & MD=0 & MD=0 & MD=0  AD=0 & MD=0 & MD=0 & MD=0 & MD=0 & MD=0  AD=0 & MD=0 & MD=	DISPERSED	+ PARTICLE (REALISTIC )	ESTIMATE) ACTIV	TTY		385	kBq	522	kBq	
SPECIFIC ACTIVITY   5,635 Bq/kg   38 Bq/kg	MAX	IMUM/SORT				77	kBq	19	kBq	
WORK DAY  WORK DAY START  PROCESSING START  07:24 AM  PLANT STARTUP TIME  PROCESSING END  08:50 AM  WORK DAY END  05:30 PM  PLANT SHUTDOWN TIME  8.67 hr  LUNCH PERIOO  MORK HOURS  10.0 hr  MAX PROCESS HOURS (END-START)  ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS)  1.42 hr  ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS)  1.43 hr  TOTAL SYSTEM PAUSE TIME  0.00 hr  TOTAL DOWNTIME (MAX-ACTUAL)  TIME UTILIZATION (ACTUAL HRS/MORK HRS)  10.0 hr  14.3%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  250  NONPROCESS RECORDS  257  TOTAL SORT  NO SORT  50ME SORT  10 MD>0 & MND=0  MD>0 & MD=0 & MND>0  AD=0 & MD>0	MIN	IMUM/SORT				0	Bq	-5	kBq	
WORK DAY START   O7:00 AM     PROCESSING START   O7:24 AM     PLANT STARTUP TIME   O.42 hr     PROCESSING END   O8:50 AM     WORK DAY END   O5:30 PM     PLANT SHUTDOWN TIME   8.67 hr     LUNCH PERIOO   O.5 hr     WORK HOURS   10.0 hr     ACTUAL PROCESS HOURS (END-START)   1.42 hr     ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIOOS)   1.43 hr     TOTAL SYSTEM PAUSE TIME   O.00 hr     TOTAL DOWNTIME (MAX-ACTUAL)   -0.01 hr     TIME UTILIZATION (ACTUAL HRS/WORK HRS)   14.3%    TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)   250     NONPROCESS RECORDS   257     TOTAL SORT   0 MD>0 & MND=0     NO SORT   193 AD=0 & MD=0 & MND>0     AD=0 & MD   0     AD=0 & MD   0	SPE	CIFIC ACTIVITY				5,635	Bq/kg	38	Bq/kg	
WORK DAY START   O7:00 AM     PROCESSING START   O7:24 AM     PLANT STARTUP TIME   O.42 hr     PROCESSING END   O8:50 AM     WORK DAY END   O5:30 PM     PLANT SHUTDOWN TIME   8.67 hr     LUNCH PERIOO   O.5 hr     WORK HOURS   10.0 hr     ACTUAL PROCESS HOURS (END-START)   1.42 hr     ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIOOS)   1.43 hr     TOTAL SYSTEM PAUSE TIME   O.00 hr     TOTAL DOWNTIME (MAX-ACTUAL)   -0.01 hr     TIME UTILIZATION (ACTUAL HRS/WORK HRS)   14.3%    TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)   250     NONPROCESS RECORDS   257     TOTAL SORT   0 MD>0 & MND=0     NO SORT   193 AD=0 & MD=0 & MND>0     AD=0 & MD   0     AD=0 & MD   0										
PROCESSING START 07:24 AM PLANT STARTUP TIME 0.42 hr PROCESSING END 08:50 AM WORK DAY END 05:30 PM PLANT SHUTDOWN TIME 8.67 hr  LUNCH PERIOO 0.5 hr MORK HOURS 10.0 hr MAX PROCESS HOURS (END-START) 1.42 hr ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS) 1.43 hr TOTAL SYSTEM PAUSE TIME 0.000 hr TOTAL DOWNTIME (MAX-ACTUAL) -0.01 hr TIME UTILIZATION (ACTUAL HRS/WORK HRS) 14.3%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 250 NONPROCESS RECORDS (Test, calibration, etc) 10  20-SEC PROCESS RECORDS 257 TOTAL SORT 0 MD>0 & MND=0 & MND=0 NO SORT 193 AD=0 & MD=0 & MND>0 AD=0 & MD>0 & MD>0 AD=0 & MD>0 & MD>0 AD=0 & MD=0 & MD=0 AD=0 & MD=0 AD=		V D.V GTADT	07.00 ***							
PLANT STARTUP TIME PROCESSING END 08:50 AM MORK DAY END 05:30 PM PLANT SHUTDOUN TIME 8.67 hr  LUNCH PERIOO 0.5 hr MORK MOURS 10.0 hr MAX PROCESS HOURS (END-START) 1.42 hr ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS) 1.43 hr TOTAL SYSTEM PAUSE TIME 0.00 hr TOTAL ODMNTIME (MAX-ACTUAL) -0.01 hr TIME UTILIZATION (ACTUAL HRS/MORK HRS) 14.3%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 250 NONPROCESS RECORDS (70 ACTUAL HRS/MORK HRS) 10 MD>0 & MND=0  **NO SORT 193 AD=0 & MD=0 & MND>0  **AD=0 & MD 0  **AD=0 & MD 0  **AD=0 & MD 0  **O AD=0 & MD 0  **AD=0 & MD 0  **O ACTUAL HRS/MORK MRS ACTUAL MRS/MORK MRS AD-0 & MND=0  **O ACTUAL SOIL PROCESSING RECORDS (10 MD>0 MD>0 MD>0 MD>0 MD>0 MD>0 MD>0 MD=0 MD=0 MD=0 MD=0 MD=0 MD=0 MD=0 MD=										
PROCESSING END 08:50 AM WORK DAY END 05:30 PM  PLANT SHUTDOWN TIME 8.67 hr  LUNCH PERIOD 0.5 hr  MORK HOURS 10.0 hr  MAX PROCESS HOURS (END-START) 1.42 hr  ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS) 1.43 hr  TOTAL SYSTEM PAUSE TIME 0.00 hr  TOTAL DOWNTIME (MAX-ACTUAL) -0.01 hr  TIME UTILIZATION (ACTUAL HRS/WORK HRS) 14.3%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 250  NONPROCESS RECORDS (Test, calibration, etc) 10  20-SEC PROCESS RECORDS 257  TOTAL SORT 0 MD>0 & MND=0  NO SORT 193 AD=0 & MD=0 & MND>0  AD=0 & MD>0 & MD 0			07:24 AM				0.72.1			
MORK DAY END   05:30 PM							0.42 hr			
PLANT SHUTDOWN TIME										
LUNCH PERIOD 0.5 hr  MORK HOURS 10.0 hr  MAX PROCESS HOURS (END-START) 1.42 hr  ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS) 1.43 hr  TOTAL SYSTEM PAUSE TIME 0.00 hr  TOTAL DOWNTIME (MAX-ACTUAL) -0.01 hr  TIME UTILIZATION (ACTUAL HRS/MORK HRS) 14.3%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 250  NONPROCESS RECORDS (Test, calibration, etc) 10  20-SEC PROCESS RECORDS 257  TOTAL SORT 0 MD>0 & MND=0  NO SORT 193 AD=0 & MD=0 & MND>0  AD=0 & MD>0 0  AD=0 & MD>0 0			05:30 PM				0 /7 -			
MORK HOURS	PLA	NI SHUIDOWN IIME					8.0/ Mr			
MAX PROCESS HOURS (END-START)  ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS)  TOTAL SYSTEM PAUSE TIME  TOTAL DOWNTIME (MAX-ACTUAL)  TIME UTILIZATION (ACTUAL HRS/WORK HRS)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 AD-0 & MD-0  AD-0 & MD  0  AD-0 & MD  0	LUN	CH PERIOD					0.5 hr			
ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS)  TOTAL SYSTEM PAUSE TIME  TOTAL DOWNTIME (MAX-ACTUAL)  TIME UTILIZATION (ACTUAL HRS/WORK HRS)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 < AD > 0	WOR	C HOURS					10.0 hr			
TOTAL SYSTEM PAUSE TIME	MAX	PROCESS HOURS (END-STA	RT)				1.42 hr			
TOTAL DOWNTIME (MAX-ACTUAL) TIME UTILIZATION (ACTUAL HRS/MORK HRS)  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 < AD=0 & MD>0  AD=0 & MD>0  D  AD=0 & MD>0  D	ACT	JAL PROCESS HOURS (TOTA	L 20-SEC SORT	PERIODS)			1.43 hr			
TIME UTILIZATION (ACTUAL HRS/WORK HRS)  14.3%  TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC)  NONPROCESS RECORDS (Test, calibration, etc)  20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 <ad<1kbq &="" md="">0  AD=0 &amp; MD 0</ad<1kbq>	TOTA	AL SYSTEM PAUSE TIME					0.00 hr			
TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 250  NONPROCESS RECORDS (Test, calibration, etc) 10  20-SEC PROCESS RECORDS 257  TOTAL SORT 0 MD>0 & MND=0  NO SORT 193 AD=0 & MD=0 & MND>0  SOME SORT 64 AD>0&O	TOTA	AL DOWNTIME (MAX-ACTUAL	.)				-0.01 hr			
10   20-SEC PROCESS RECORDS   257   0 MD>0 & MND=0   193 AD=0 & MD=0 & MND>0   MND=0 & MND=0 & MND=0 & MND=0 & MND=0 & MND=0 & MND>0   MD=0 & MD=0 & MND=0 & MND=0 & MND=0 & MND=0 & MND=0 & MD=0 & MND=0 & MND=0 & MND=0 & MD=0 & MND=0 & MD=0 & MND=0 & MD=0 & MD=0 & MND=0 & MD=0 & M	TIME	UTILIZATION (ACTUAL H	RS/WORK HRS)				14.3%			
10   20-SEC PROCESS RECORDS   257   0 MD>0 & MND=0   193 AD=0 & MD=0 & MND>0   MND=0 & MND=0 & MND=0 & MND=0 & MND=0 & MND=0 & MND>0   MD=0 & MD=0 & MND=0 & MND=0 & MND=0 & MND=0 & MND=0 & MD=0 & MND=0 & MND=0 & MND=0 & MD=0 & MND=0 & MD=0 & MND=0 & MD=0 & MD=0 & MND=0 & MD=0 & M	TOTAL COLL	processing peropos (2-	sec and 20-sec.			250				
20-SEC PROCESS RECORDS  TOTAL SORT  NO SORT  SOME SORT  UNEXPLAINED RECORDS  0 < AD < 1 kBq & MD > 0  AD = 0 & MD > 0  AD = 0 & MD = 0  MD > 0 & MND = 0  MD > 0 & MD = 0  MD = 0 & MND > 0  64 AD > 0 & 0 < 0 < 0 < 0 < 0 < 0 < 0 < 0 < 0 <				,						
TOTAL SORT	NORF ROCESS	RECORDS (Test, Catible	ictor, etc)							
NO SORT 193 AD=0 & MD=0 & MND>0  SOME SORT 64 AD>0&0 <md<mndmax&mnd<mndmax &="" 0="" md="" o<ad<1kbq="" records="" unexplained="">0 0  AD=0 &amp; MD 0</md<mndmax&mnd<mndmax>	20-5	SEC PROCESS RECORDS				257				
SOME SORT 64 AD>0&0 <md<mndmax&mnd<mndmax &="" 0="" md="" o<ad<1kbq="" records="" unexplained="">0 0  AD=0 &amp; MD 0</md<mndmax&mnd<mndmax>		TOTAL SORT				0	MD>0 & MND=0	)		
UNEXPLAINED RECORDS 0 0 <ad<1kbq &="" md="">0 0 AD=0 &amp; MD 0</ad<1kbq>		NO SORT				193	0=GM & 0=GA	& MND>0		
0 <ad<1kbq &="" md="">0 0 AD=0 &amp; MD 0</ad<1kbq>		SOME SORT				64	AD>0&0 <md<mn< td=""><td>M&gt; QNM&amp;xemQl</td><td>IDmax</td><td></td></md<mn<>	M> QNM&xemQl	IDmax	
AD=0 & MD 0		UNEXPLAINED RECOR	DS			0				
		0 <ad<1kbq &="" md="">0</ad<1kbq>	0							
AD<0 & MD 0		AD=0 &	MD 0							
		AD<0 &	MD 0							

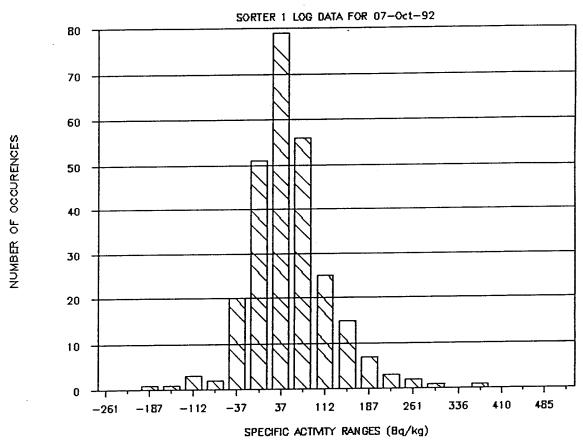
A-637

2.	-SEC CO	UNT PERIODS			-	2,570					
-	-	2-SEC RECORD	S WITH S	ORTS		57	AP>0				
		2-SEC RECORD			IN >1 DE	TECTOR					
			DETECTO		14		87.5%				
			DETECTO		2		12.5%				
•			DETECTO		0		0.0%				
		5	DETECTO	RS	0		0.0%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
		8	DETECTO	RS	0		0.0%				
		т	OTAL			16					
		urr 2 occ 85	conne III	71 CODTC		41					
		NET 2-SEC RE				2,529					
		2-SEC PERIOD				125.4					
		AVG TIME BET	WEEN 2-5	EL SURIS		123.4	Sec				
1-GATE SO	ORTS	32	ACT_ND	NUMBER	SPEC_A		A	CT_P	SORT	FREQ%	ACT_P
DETECTO	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)
									_		
1	1	3.8%	-14000	0	-261			4000	1		4
2	5	19.2%	-12000	0	-224			8000		100.0%	8
3	3	11.5%	-10000	1	-187			2000	7		12
4	3	11.5%	-8000	1	-149			6000	4	14.3%	16
5	9	34.6%	-6000	3	-112			0000	4	14.3%	20
6	9	34.6%	-4000	2	-75			4000	3	10.7%	24
7	2	7.7%	-2000	20	-37			8000	2	7.1%	28
8	0	0.0%	0	51	0			2000	1	3.6%	32 36
TOTAL	26		2000	79	37			6000	0	0.0%	40
			4000	56	75			0000	0	0.0%	44
2-GATE SC	ORTS	25	6000	25	112			4000	1	3.6%	48
DETECTO	SORTS	FREQ%	8000	15	149			8000	0	0.0%	52
8			10000	7	187			2000	2	7.1%	56
9	2	8.0%	12000	3	224			6000	1	3.6%	60
10	4	16.0%	14000	2	261			0000	0	0.0%	
11	3	12.0%	16000	1	299			4000	0	0.0%	64
12	3	12.0%	18000	0	336			8000	0	0.0%	68
13	9	36.0%	20000	1	373			2000	0	0.0%	72
14	4	16.0%	22000	0	410			6000	0	0.0%	76
15	0	0.0%	24000	0	448			0000	0	0.0%	80 84
TOTAL	25		26000	0	485			4000	0	0.0%	>84
			>28000	0	0			4000	3	10.7%	204
			TOTAL	267			10	OTAL	28		
HF	oF.	27		GATE1	57						
MF		45		GATE2	25						
FIF	_	4.5									

NOTE: REC code 1 = Source check; 2 = Empty belt; 3 = Test

DISE





SORTER 2 07-Oct-92			
AVERAGE BACKGROUND COUNT RATE	0.79 ± 0	.03 c/sec	
SORTER SOIL DENSITY	1.15 tons/m <sup>3</sup>		
GROUND SOIL DENSITY	1.65 tons/m <sup>3</sup>		
		CONTAMINATED	CLEAN
MASS TOTAL		0.09 tons	14.1 tons
MAXIMUM/SORT		2.7 kg	53.6 kg
MINIMUM/SORT		0.7 kg	50.9 kg
WEIGHT RECOVERY OR VOLUME RECOVER	Υ		99.3%
EQUIVALENT SOIL-IN-GROUND		0.07 yd <sup>3</sup>	11.1 yd³ 11.2 yd³/day
PARTICLE ACTIVITY (MAXIMUM ESTIMA	TE)		
TOTAL		844 kBq	
MAXIMUM/SORT		67 kBq	
MINIMUM/SORT		4.3 kBq	
DISPERSED + PARTICLE (REALISTIC E	STIMATE) ACTIVITY	384 kBq	1,082 kBq
MAXIMUM/SORT		51 kBq	17 kBq
MINIMUM/SORT		0 Bq	-5 kBq
SPECIFIC ACTIVITY		4,168 Bq/kg	77 Bq/kg
WORK DAY			
WORK DAY START	07:00 AM		
PROCESSING START	07:24 AM		
PLANT STARTUP TIME		0.42 hr	
PROCESSING END	08:52 AM		
WORK DAY END	05:30 PM		
PLANT SHUTDOWN TIME		8.63 hr	
LUNCH PERIOD		0.5 hr	
WORK HOURS		10.0 hr	
MAX PROCESS HOURS (END-STA	RT)	1.46 hr	
ACTUAL PROCESS HOURS (TOTAL	L 20-SEC SORT PERIODS)	1.47 hr	
TOTAL SYSTEM PAUSE TIME		0.00 hr	
TOTAL DOWNTIME (MAX-ACTUAL	)	-0.01 hr	
TIME UTILIZATION (ACTUAL H	RS/WORK HRS)	14.7%	
TOTAL SOIL PROCESSING RECORDS (2-	SEC and 20-SEC)	248	
NONPROCESS RECORDS (Test, calibra	tion, etc)	3	
20-SEC PROCESS RECORDS		264	
TOTAL SORT		0 MD>0 & MND=0	
NO SORT		182 AD=0 & MD=0 8	MND>0
SOME SORT		82 AD>0&0 <md<mn0< td=""><td></td></md<mn0<>	
UNEXPLAINED RECORD	os	0	
0 <ad<1kbq &="" md="">0</ad<1kbq>	0		•
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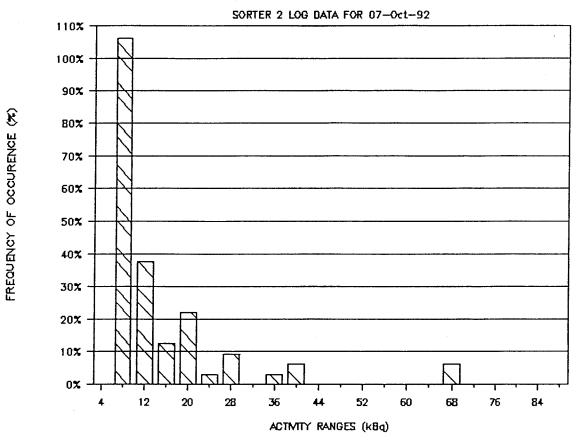
A-641

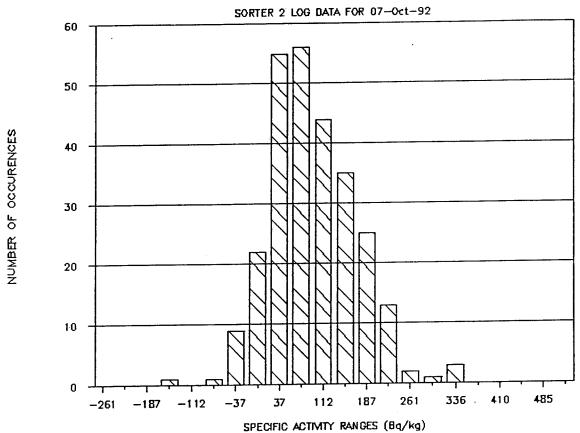
2,640

2	SEC CO	ONI PERIODS				2,040				
		2-SEC RECORD				66 /	AP>0			
2-SEC RECORDS WITH POSITIVES					IN >1 DE	TECTOR				
		2	DETECTO	RS	16	7	76.2%			
		3	DETECTO	RS	4	•	19.0%			
		4	DETECTO	RS	· 1		4.8%			
		5	DETECTO	RS	0		0.0%			
		6	DETECTO	RS	0		0.0%			
		7	DETECTO	RS	0		0.0%			
		8	DETECTO	RS	0		0.0%			
		T	OTAL			21				
		NET 2-SEC RE	CORDS WI	TH SORTS		45				
	•	2-SEC PERIOD				2,595				
		AVG TIME BET	WEEN 2-S	EC SORTS		117.3 s	sec			
1-GATE S	OPTS	32	ACT ND	NUMBER	SPEC_A		ACT_P	SORT	FREQ%	ACT_P
DETECTO	SORTS		(Bq)		(Bq/kg)		(Bq)	(#)		(kBq)
DETECTO	CORTO		V- 4,	•						
1	1	4.0%	-14000	0	-261		4000	0	0.0%	4
2	6	24.0%	-12000	0	-224		8000	34	106.3%	8
3	2	8.0%	-10000	0	-187		12000	12	37.5%	12
4	5	20.0%	-8000	1	-149		16000	4	12.5%	16
5	9	36.0%	-6000	0	-112		20000	7	21.9%	20
6	5	20.0%	-4000	1	-75		24000	1	3.1%	24
7	3	12.0%	-2000	9	-37		28000	3	9.4%	28
8	1	4.0%	0	22	0		32000	0	0.0%	32
TOTAL	25		2000	55	37		36000	1	3.1%	36
			4000	56	75		40000	2	6.3%	40
2-GATE S	ORTS	34	6000	44	112		44000	0	0.0%	44
DETECTO	SORTS	FREQ%	8000	35	149		48000	0	0.0%	48
8			10000	25	187		52000	0	0.0%	52
9	5	14.7%	12000	13	224		56000	0	0.0%	56
10	6	17.6%	14000	2	261		60000	0	0.0%	60
11	5	14.7%	16000	1	299		64000	0	0.0%	64
12	3	8.8%	18000	3	336		68000	2	6.3%	68
13	9	26.5%	20000	0	373		72000	0	0.0%	72
14	4	11.8%		0	410		76000	0		76
15	2	5.9%	24000	0	448		80000	0	0.0%	80
TOTAL	34		26000	0	485		84000	0	0.0%	84
			>28000	0	0		>84000	0	0.0%	>84
			TOTAL	267			TOTAL	32		
H	PE	32		GATE1	66					
	PE	58		GATE2	34					
	ISE	0								

NOTE: REC code 1 = Source check; 2 = Empty belt; 3 = Test

2-SEC COUNT PERIODS





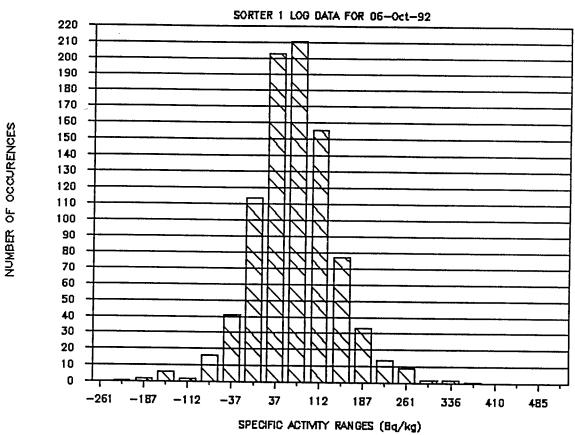
SORTER 1 06-Oct-92	-		
AVERAGE BACKGROUND COUNT RATE	0.78 ±	0.06 c/sec	
SORTER SOIL DENSITY	1.15 tons	/m³	
GROUND SOIL DENSITY	1.65 tons	/m³	
		CONTAMINATED	CLEAN
MASS TOTAL		0.29 tons	46.9 tons
MAXIMUM/SORT		5.4 kg	53.6 kg
MINIMUM/SORT		0.7 kg	48.2 kg
WEIGHT RECOVERY OR VOLUME RECO	VERY		99.4%
EQUIVALENT SOIL-IN-GROUND		0.23 yd³	37.2 yd <sup>3</sup> 37.4 yd <sup>3</sup> /day
PARTICLE ACTIVITY (MAXIMUM EST	IMATE)		
TOTAL	•	5,347 kBq	
MAXIMUM/SORT		444 kBq	
MINIMUM/SORT		3.2 kBq	
DISPERSED + PARTICLE (REALISTI	C ESTIMATE) ACTIVITY	1,897 kBq	2,441 kBq
MAXIMUM/SORT		244 kBq	18 kBq
MINIMUM/SORT		0 Bq	-9 kBq
SPECIFIC ACTIVITY		6,549 Bq/kg	52 Bq/kg
HORK DAY			
WORK DAY START	07:00 AM		
PROCESSING START	10:56 AM		
PLANT STARTUP TIME		3.95 hr	
PROCESSING END	05:02 PM		
WORK DAY END	05:30 PM		•
PLANT SHUTDOWN TIME		0.47 hr	
LUNCH PERIOD		0.5 hr	
WORK HOURS		10.0 hr	•
MAX PROCESS HOURS (END-	START)	6.09 hr	
ACTUAL PROCESS HOURS (T	OTAL 20-SEC SORT PERIODS)	4.89 hr	
TOTAL SYSTEM PAUSE TIME		0.00 hr	
TOTAL DOWNTIME (MAX-ACT		1.20 hr	
TIME UTILIZATION (ACTUA	L HRS/WORK HRS)	48.8%	
TOTAL SOIL PROCESSING RECORDS	(2-SEC and 20-SEC)	888	
NONPROCESS RECORDS (Test, cali	bration, etc)	9	
20-SEC PROCESS RECORDS		880	
TOTAL SORT		0 MD>0 & MND=0	
NO SORT		635 AD=0 & MD=0	& MND>0
SOME SORT		245 AD>0&0 <md<mn< td=""><td>Dmax&amp;MND<mndmax< td=""></mndmax<></td></md<mn<>	Dmax&MND <mndmax< td=""></mndmax<>
UNEXPLAINED RE	CORDS	0	
0 <ad<1kbq &="" md<="" td=""><td></td><td></td><td></td></ad<1kbq>			
	) & MD 0		
AD<	0 MM & C		

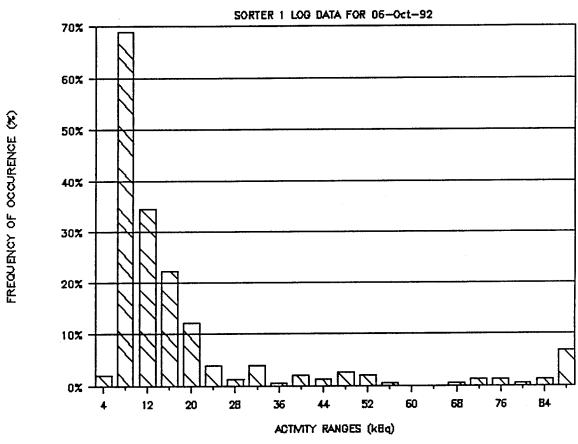
8,800

2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR 2 DETECTORS 55 82.1% 3 DETECTORS 10 14.9% 4 DETECTORS 2 3.0% 5 DETECTORS 0 0.0% 6 DETECTORS 0 0.0% 7 DETECTORS 0 0.0% 8 DETECTORS 0 0.0% 8 DETECTORS 0 0.0% 7 DETECTORS 0 0.0% 8 DETECTORS 0 0.0% 10	-		2-SEC RECORD	S WITH S	ORTS		253 AP	>0			
Company						IN >1 DE	TECTOR				
Second   S								.1%			
A DETECTORS						10	14	.9%			
S DETECTORS   0   0.0%											
ACT_P   SORTS   TABLE   TABLE   SORTS   TABLE   TAB			-				0	-0%			
T DETECTORS						0					
NET 2-SEC RECORDS WITH NORTS   186   2-SEC PERIODS WITH NORTS   186   2-SEC PERIODS WITH NORTS   186   4   4   4   4   4   4   4   4   4						0					
NET 2-SEC RECORDS WITH NOTS 2-SEC PERIODS WITH NO SORTS 2-SEC PERIODS WITH NO SORTS 8,614 AVG TIME BETWEEN 2-SEC SORTS 94.6 sec  1-GATE SORTS 134 ACT_ND NUMBER SPEC_A 800. (Bq) (#) CBq/kg)  1 2 1.8% -14000 0 -261 4000 3 2.0% 4 2 20 17.9% -12000 1 -224 8000 102 68.9% 8 3 16 14.3% -10000 2 -187 12000 51 34.5% 12 4 20 17.9% -8000 6 -149 16000 33 22.3% 16 5 27 24.1% -6000 2 -112 20000 18 12.2% 20 6 31 27.7% -4000 16 -75 24000 6 4.1% 24 7 18 16.1% -2000 41 -37 28000 2 1.4% 28 8 0 0.0% 0 114 0 32000 6 4.1% 28 8 8 0 0.0% 0 114 0 32000 6 4.1% 33 TOTAL 112 2000 203 37 36000 1 0.7% 36 10TAL 112 4000 211 75 40000 3 2.0% 40 2-GATE SORTS FREQX 8000 77 149 48000 4 2.7% 48 8 1000 33 187 52000 3 2.0% 40 2-GATE SORTS FREQX 8000 77 149 48000 4 2.7% 48 8 1000 33 187 52000 5 2.0% 50 11 17 14.3% 16000 9 261 60000 0 0.0% 60 11 17 14.3% 16000 2 299 64000 0 0 0.0% 60 11 17 14.3% 16000 2 299 64000 0 0 0.0% 64 12 20 16.8% 18000 2 336 68000 1 0.7% 56 10 16 13.4% 14000 9 261 60000 0 0.0% 64 12 20 16.8% 18000 2 336 68000 1 0.7% 68 13 32 26.9% 20000 1 373 72000 2 1.4% 72 14 20 16.8% 18000 2 299 64000 0 0.0% 64 15 7 5.9% 24000 0 448 80000 1 0.7% 68 13 32 26.9% 20000 1 373 72000 2 1.4% 72 14 20 16.8% 18000 2 336 68000 1 0.7% 68 13 32 26.9% 20000 1 373 77000 2 1.4% 76 15 7 5.9% 24000 0 448 80000 1 0.7% 68 13 32 26.9% 20000 1 373 77000 2 1.4% 76 10 16 13.4% 18000 2 299 64000 0 0.0% 64 12 20 16.8% 18000 2 336 68000 1 0.7% 68 13 32 26.9% 20000 1 373 77000 2 1.4% 76 15 7 5.9% 24000 0 448 80000 1 0.7% 68 13 32 26.9% 20000 0 1 0.7% 68 15 7 5.9% 24000 0 448 80000 1 0.7% 68 16 17 7 5.9% 24000 0 448 80000 1 0.7% 80 10 10 16 8.8% 18000 2 336 80000 1 0.7% 80 10 10 16 8.8% 18000 2 336 80000 1 0.7% 80 10 10 16 8.8% 18000 2 336 80000 1 0.7% 80 10 10 16 8.8% 18000 2 336 80000 1 0.7% 80 10 10 16 8.8% 18000 2 336 80000 1 0.7% 80 10 10 16 8.8% 18000 2 336 80000 1 0.7% 80 10 10 10 6.8% 28000 1 0.7% 80 10 10 10 6.8% 28000 1 0.7% 80 10 10 6.8% 28000 1 0.7% 80 10 10 6.8% 28000 1 0.7% 80 10 10 6.8% 28000 1 0.7% 80 10 10 6.8% 28000 1 0.7% 80 10 10 6.8% 28000 1 0.7%						0					
NET 2-SEC RECORDS WITH NOT SORTS   186   2-SEC PERIODS WITH NO SORTS   8,614   94.6 sec											
2-SEC PERIODS MITH NO SORTS AVG TIME BETWEEN 2-SEC SORTS 94.6 sec  1-GATE SORTS 134 ACT_ND NUMBER SPEC_A ACT_P SORT FREQX ACT_P DETECTO SORTS FREQX (Bq) (#) (Bq/kg) (Bq) (#) (kBq)  1 2 1.8% -14000 0 -261 4000 102 68.9% 4 2 20 17.9% -12000 1 -224 8000 102 68.9% 8 3 16 14.3% -10000 2 -187 12000 51 34.5% 12 4 20 17.9% -8000 6 -149 16000 33 22.3% 16 5 27 24.1% -6000 2 -112 20000 18 12.2% 20 6 31 27.7% -4000 16 -75 24000 6 4.1% 24 7 18 16.1% -2000 41 -37 28000 2 1.4% 24 8 0 0.0% 0 114 0 32000 6 4.1% 32 8 0 0.0% 10 114 0 32000 6 4.1% 32 TOTAL 112 2000 203 37 36000 1 0.7% 36 10 10 10 10 155 112 44000 2 1.4% 44 DETECTO SORTS FREQX 8000 77 149 48000 4 2.7% 44  B			•								
1-GATE   SORTS   134   ACT   NO   NUMBER   SPEC   A   SORT   FREQX   CBq)   C#   CBq/kg)   CBq   CBq/kg)			NET 2-SEC RE	CORDS WI	TH SORTS		186				
1-GATE SORTS			2-SEC PERIOD	S WITH N	O SORTS		8,614				
Total   112   1.8%   1.000   114   0   0   0   0   0   0   0   0   0			AVG TIME BET	WEEN 2-S	EC SORTS		94.6 se	c			
Total   Tize	1 0175 60	DETC	17/	ACT NO	NIMBED	SPEC A		ACT P	SORT	FREQ%	ACT P
1 2 1.8% -14000 0 -261 4000 3 2.0% 4 2 20 17.9% -12000 1 -224 8000 102 68.9% 8 3 16 14.3% -10000 2 -187 12000 51 34.5% 12 4 20 17.9% -8000 6 -149 16000 33 22.3% 16 5 27 24.1% -6000 2 -112 20000 18 12.2% 20 6 31 27.7% -4000 16 -75 24000 6 4.1% 24 7 18 16.1% -2000 41 -37 28000 2 1.4% 28 8 0 0.0% 0 114 0 32000 6 4.1% 32 TOTAL 112 2000 203 37 36000 1 0.7% 36 4000 211 75 40000 3 2.0% 40 2-GATE SORTS 119 6000 155 112 44000 2 1.4% 44 DETECTO SORTS FREQX 8000 77 149 48000 4 2.7% 48 8 10 0.0% 3 187 52000 3 2.0% 52 9 7 5.9% 12000 14 224 56000 1 0.7% 56 10 16 13.4% 14000 9 261 60000 0 0.0% 60 11 17 14.3% 16000 2 299 64000 0 0.0% 60 11 17 14.3% 16000 2 299 64000 0 0.0% 64 12 20 16.8% 18000 2 336 68000 1 0.7% 68 13 32 26.9% 20000 1 373 72000 2 1.4% 72 14 20 16.8% 18000 2 336 68000 1 0.7% 68 13 32 26.9% 20000 1 373 72000 2 1.4% 72 14 20 16.8% 22000 0 410 76000 2 1.4% 76 15 7 5.9% 24000 0 485 84000 1 0.7% 80 TOTAL 119 26000 0 0 0 \$84000 10 0.7% 80 TOTAL 119 26000 0 0 0 \$84000 10 0.7% 80 TOTAL 119 26000 0 0 0 \$84000 1 0.7% 80 TOTAL 119 26000 0 0 0 \$84000 10 0.7% 80 TOTAL 889 TOTAL 148				_				_			
2 20 17.9% -12000 1 -224 8000 102 68.9% 8 3 116 14.3% -10000 2 -187 12000 51 34.5% 12 4 20 17.9% -8000 6 -149 16000 33 22.3% 16 5 27 24.1% -6000 2 -112 20000 18 12.2% 20 6 31 27.7% -4000 16 -75 24000 6 4.1% 24 7 18 16.1% -2000 41 -37 28000 2 1.4% 28 8 0 0.0% 0 114 0 32000 6 4.1% 32  TOTAL 112 2000 203 37 36000 1 0.7% 36 4000 211 75 40000 3 2.0% 40  2-GATE SORTS 119 6000 155 112 44000 2 1.4% 44  DETECTO SORTS FREQ% 8000 77 149 48000 4 2.7% 48 8 10000 33 187 52000 3 2.0% 52 9 7 5.9% 12000 14 224 56000 1 0.7% 56 10 16 13.4% 14000 9 261 60000 0 0.0% 60 11 17 14.3% 16000 2 299 64000 0 0.0% 60 11 17 14.3% 16000 2 299 64000 0 0.0% 60 11 17 14.3% 16000 2 299 64000 0 0.0% 64 12 20 16.8% 18000 2 336 68000 1 0.7% 68 13 32 26.9% 20000 1 373 72000 2 1.4% 72 14 20 16.8% 22000 0 410 76000 2 1.4% 72 14 20 16.8% 22000 0 448 80000 1 0.7% 80 TOTAL 119 26000 0 485 84000 2 1.4% 84  NPE 117 GATE1 253 MPE 119	DETECTO	SUKTS	FREGA	(pq)	(#7	(pd) v3)		1040			•
2 20 17.9% -12000 1 -224 8000 102 68.9% 8 3 16 14.3% -10000 2 -187 12000 51 34.5% 12 4 20 17.9% -8000 6 -149 16000 33 22.3% 16 5 27 24.1% -6000 2 -112 20000 18 12.2% 20 6 31 27.7% -4000 16 -75 24000 6 4.1% 24 7 18 16.1% -2000 41 -37 28000 2 11.4% 28 8 0 0.0% 0 114 0 32000 6 4.1% 32  TOTAL 112 2000 203 37 36000 1 0.7% 36 4000 211 75 40000 3 2.0% 40  2-GATE SORTS 119 6000 155 112 44000 2 11.4% 44  DETECTO SORTS FREQX 8000 77 149 48000 4 2.7% 48  8 10000 33 187 52000 3 2.0% 52 9 7 5.9% 12000 14 224 56000 1 0.7% 56 10 16 13.4% 14000 9 261 60000 0 0.0% 60 11 17 14.3% 16000 2 299 64000 0 0.0% 60 11 17 14.3% 16000 2 299 64000 0 0.0% 64 12 20 16.8% 18000 2 336 68000 1 0.7% 68 13 32 26.9% 20000 1 373 72000 2 11.4% 72 14 20 16.8% 22000 0 410 76000 2 1.4% 76 15 7 5.9% 24000 0 485 84000 1 0.7% 80 TOTAL 119 26000 0 485 84000 2 1.4% 84  PHE 117 GATE1 253  HPE 117 GATE1 253	1	2	1.8%	-14000	0	-261		4000	3	2.0%	4
3       16       14.3x -10000       2       -187       12000       51       34.5x       12         4       20       17.9x -8000       6       -149       16000       33       22.3x       16         5       27       24.1x -6000       2       -112       20000       18       12.2x       20         6       31       27.7x -4000       16       -75       24000       6       4.1x       24         7       18       16.1x -2000       41       -37       28000       2       1.4x       28         8       0       0.0x       0       114       0       32000       6       4.1x       32         TOTAL       112       2000       203       37       36000       1       0.7x       36         4000       211       75       40000       3       2.0x       40         2-GATE SORTS       119       6000       155       112       44000       2       1.4x       44         DETECTO       SORTS       FREQX       8000       77       149       48000       4       2.7x       48         8       10000       33       187				-12000	1	-224		8000	102	68.9%	8
4 20 17.9% -8000 6 -149 16000 33 22.3% 16 5 27 24.1% -6000 2 -112 20000 18 12.2% 20 6 31 27.7% -4000 16 -75 24000 6 4.1% 24 7 18 16.1% -2000 41 -37 28000 2 1.4% 28 8 0 0.0% 0 114 0 32000 6 4.1% 32 TOTAL 112 2000 203 37 36000 1 0.7% 36 2-GATE SORTS 119 6000 155 112 44000 2 1.4% 44 DETECTO SORTS FREQX 8000 77 149 48000 4 2.7% 48 8 10000 33 187 52000 3 2.0% 52 9 7 5.9% 12000 14 224 56000 1 0.7% 56 10 16 13.4% 14000 9 261 60000 0 0.0% 60 11 17 14.3% 16000 2 299 64000 0 0.0% 64 12 20 16.8% 18000 2 336 68000 1 0.7% 56 13 32 26.9% 20000 1 373 72000 2 1.4% 72 14 20 16.8% 18000 2 336 68000 1 0.7% 68 13 32 26.9% 20000 1 373 72000 2 1.4% 72 14 20 16.8% 22000 0 410 76000 2 1.4% 76 15 7 5.9% 24000 0 448 80000 1 0.7% 80 TOTAL 119 26000 0 0 485 84000 2 1.4% 76 TOTAL 119 26000 0 0 485 84000 1 0.7% 80 TOTAL 119 26000 0 0 88500 10 6.8% >84  HPE 117 GATE1 253 MPE 117 GATE1 253 MPE 159 GATE2 119			14.3%	-10000	2	-187		12000	51	34.5%	12
6 31 27.7% -4000 16 -75 24000 6 4.1% 24 7 18 16.1% -2000 41 -37 28000 2 1.4% 28 8 0 0.0% 0 114 0 32000 6 4.1% 32  TOTAL 112 2000 203 37 36000 1 0.7% 36 4000 211 75 40000 3 2.0% 40  2-GATE SORTS 119 6000 155 112 44000 2 1.4% 44  DETECTO SORTS FREQX 8000 77 149 48000 4 2.7% 48 8 10000 33 187 52000 3 2.0% 52 9 7 5.9% 12000 14 224 56000 1 0.7% 56 10 16 13.4% 14000 9 261 60000 0 0.0% 60 11 17 14.3% 16000 2 299 64000 0 0.0% 64 12 20 16.8% 18000 2 336 68000 1 0.7% 68 13 32 26.9% 20000 1 373 72000 2 1.4% 72 14 20 16.8% 18000 2 336 68000 1 0.7% 68 13 32 26.9% 20000 1 373 72000 2 1.4% 72 14 20 16.8% 22000 0 410 76000 2 1.4% 76 15 7 5.9% 24000 0 448 80000 1 0.7% 80  TOTAL 119 26000 0 485 84000 2 1.4% 76  TOTAL 119 26000 0 0 485 84000 2 1.4% 84  >28000 0 0 884000 10 6.8% >84  TOTAL 889 TOTAL 148				-8000	6	-149		16000	33	22.3%	16
7 18 16.1% -2000 41 -37 28000 2 1.4% 28 8 0 0.0% 0 114 0 32000 6 4.1% 32 TOTAL 112 2000 203 37 36000 1 0.7% 36 4000 211 75 40000 3 2.0% 40 2-GATE SORTS 119 6000 155 112 44000 2 1.4% 44 DETECTO SORTS FREQX 8000 77 149 48000 4 2.7% 48 8 10000 33 187 52000 3 2.0% 52 9 7 5.9% 12000 14 224 56000 1 0.7% 56 10 16 13.4% 14000 9 261 60000 0 0.0% 60 11 17 17 14.3% 16000 2 299 64000 0 0.0% 64 12 20 16.8% 18000 2 336 68000 1 0.7% 68 13 32 26.9% 20000 1 373 72000 2 1.4% 72 14 20 16.8% 2000 0 410 76000 2 1.4% 76 15 7 5.9% 24000 0 485 84000 1 0.7% 80 TOTAL 119 26000 0 0 485 84000 1 0.7% 80 TOTAL 119 26000 0 0 0 884000 10 6.8% >84	5	27	24.1%	-6000	2	-112		20000	18	12.2%	20
8 0 0.0% 0 114 0 32000 6 4.1% 32  TOTAL 112 2000 203 37 36000 1 0.7% 36  4000 211 75 40000 3 2.0% 40  2-GATE SORTS 119 6000 155 112 44000 2 1.4% 44  DETECTO SORTS FREQ% 8000 77 149 48000 4 2.7% 48  8 10000 33 187 52000 3 2.0% 52  9 7 5.9% 12000 14 224 56000 1 0.7% 56  10 16 13.4% 14000 9 261 60000 0 0.0% 60  11 17 14.3% 16000 2 299 64000 0 0.0% 64  12 20 16.8% 18000 2 336 68000 1 0.7% 68  13 32 26.9% 20000 1 373 72000 2 1.4% 72  14 20 16.8% 22000 0 410 76000 2 1.4% 72  14 20 16.8% 22000 0 410 76000 2 1.4% 76  15 7 5.9% 24000 0 448 80000 1 0.7% 80  TOTAL 119 26000 0 485 84000 2 1.4% 76  TOTAL 119 26000 0 0 885 84000 2 1.4% 84  **PERIOD *** PROPERS	6	31	27.7%	-4000	16	-75		24000	6	4.1%	24
TOTAL 112	7	18	16.1%	-2000	41	-37		28000	2	1.4%	
## A000 211 75 4000 3 2.0% 40  2-GATE SORTS 119 6000 155 112 44000 2 1.4% 44  DETECTO SORTS FREQX 8000 77 149 48000 4 2.7% 48  8 10000 33 187 52000 3 2.0% 52  9 7 5.9% 12000 14 224 56000 1 0.7% 56  10 16 13.4% 14000 9 261 60000 0 0.0% 60  11 17 14.3% 16000 2 299 64000 0 0.0% 64  12 20 16.8% 18000 2 336 68000 1 0.7% 68  13 32 26.9% 20000 1 373 72000 2 1.4% 72  14 20 16.8% 22000 0 410 76000 2 1.4% 72  14 20 16.8% 22000 0 410 76000 2 1.4% 76  15 7 5.9% 24000 0 448 80000 1 0.7% 80  TOTAL 119 26000 0 485 84000 2 1.4% 84  ***PROTOTAL**  ***PROTOT	8	0	0.0%	0	114	0		32000	6	4.1%	
2-GATE SORTS 119 6000 155 112 44000 2 1.4% 44  DETECTO SORTS FREQ% 8000 77 149 48000 4 2.7% 48  8 10000 33 187 52000 3 2.0% 52  9 7 5.9% 12000 14 224 56000 1 0.7% 56  10 16 13.4% 14000 9 261 60000 0 0.0% 60  11 17 14.3% 16000 2 299 64000 0 0.0% 64  12 20 16.8% 18000 2 336 68000 1 0.7% 68  13 32 26.9% 20000 1 373 72000 2 1.4% 72  14 20 16.8% 22000 0 410 76000 2 1.4% 76  15 7 5.9% 24000 0 448 80000 1 0.7% 80  TOTAL 119 26000 0 485 84000 2 1.4% 84  >28000 0 0 >84000 10 6.8% >84  TOTAL 889 TOTAL 148	TOTAL	112		2000	203	37					
DETECTO SORTS FREQX 8000 77 149 48000 4 2.7% 48  8 10000 33 187 52000 3 2.0% 52  9 7 5.9% 12000 14 224 56000 1 0.7% 56  10 16 13.4% 14000 9 261 60000 0 0.0% 60  11 17 14.3% 16000 2 299 64000 0 0.0% 64  12 20 16.8% 18000 2 336 68000 1 0.7% 68  13 32 26.9% 20000 1 373 72000 2 1.4% 72  14 20 16.8% 22000 0 410 76000 2 1.4% 76  15 7 5.9% 24000 0 448 80000 1 0.7% 80  TOTAL 119 26000 0 485 84000 2 1.4% 84  >28000 0 0 84000 10 6.8% >84  TOTAL 889 TOTAL 148				4000	211						
8	2-GATE SO	ORTS	119	6000	155						
9 7 5.9% 12000 14 224 56000 1 0.7% 56 10 16 13.4% 14000 9 261 60000 0 0.0% 60 11 17 14.3% 16000 2 299 64000 0 0.0% 64 12 20 16.8% 18000 2 336 68000 1 0.7% 68 13 32 26.9% 20000 1 373 72000 2 1.4% 72 14 20 16.8% 22000 0 410 76000 2 1.4% 76 15 7 5.9% 24000 0 448 80000 1 0.7% 80 TOTAL 119 26000 0 485 84000 2 1.4% 84 >28000 0 0 >84000 10 6.8% >84  TOTAL 889 TOTAL 148  HPE 117 GATE1 253 MPE 159 GATE2 119	DETECTO	SORTS	FREQ%	8000	77						
10 16 13.4% 14000 9 261 60000 0 0.0% 60 11 17 14.3% 16000 2 299 64000 0 0.0% 64 12 20 16.8% 18000 2 336 68000 1 0.7% 68 13 32 26.9% 20000 1 373 72000 2 1.4% 72 14 20 16.8% 22000 0 410 76000 2 1.4% 76 15 7 5.9% 24000 0 448 80000 1 0.7% 80 TOTAL 119 26000 0 485 84000 2 1.4% 84  >28000 0 0 >84000 10 6.8% >84  TOTAL 889 TOTAL 148  HPE 117 GATE1 253 MPE 159 GATE2 119	8			10000	33	187					
11 17 14.3% 16000 2 299 64000 0 0.0% 64  12 20 16.8% 18000 2 336 68000 1 0.7% 68  13 32 26.9% 20000 1 373 72000 2 1.4% 72  14 20 16.8% 22000 0 410 76000 2 1.4% 76  15 7 5.9% 24000 0 448 80000 1 0.7% 80  TOTAL 119 26000 0 485 84000 2 1.4% 84  >28000 0 0 84000 10 6.8% >84  TOTAL 889 TOTAL 148  HPE 117 GATE1 253  MPE 159 GATE2 119	9	7	5.9%	12000	14	224		56000	1		
12 20 16.8% 18000 2 336 68000 1 0.7% 68 13 32 26.9% 20000 1 373 72000 2 1.4% 72 14 20 16.8% 22000 0 410 76000 2 1.4% 76 15 7 5.9% 24000 0 448 80000 1 0.7% 80 TOTAL 119 26000 0 485 84000 2 1.4% 84  >28000 0 0 0 >84000 10 6.8% >84  TOTAL 889 TOTAL 148  HPE 117 GATE1 253 HPE 159 GATE2 119	10	16	13.4%	14000	9	261			0		
13 32 26.9% 20000 1 373 72000 2 1.4% 72 14 20 16.8% 22000 0 410 76000 2 1.4% 76 15 7 5.9% 24000 0 448 80000 1 0.7% 80  TOTAL 119 26000 0 485 84000 2 1.4% 84  >28000 0 0 >84000 10 6.8% >84  TOTAL 889 TOTAL 148  HPE 117 GATE1 253  MPE 159 GATE2 119	11	17	14.3%	16000	2	299			0		
14 20 16.8% 22000 0 410 76000 2 1.4% 76 15 7 5.9% 24000 0 448 80000 1 0.7% 80  TOTAL 119 26000 0 485 84000 2 1.4% 84  >28000 0 0 >84000 10 6.8% >84  TOTAL 889 TOTAL 148  HPE 117 GATE1 253  MPE 159 GATE2 119	12	20	16.8%	18000	2	336		68000	1	0.7%	
15 7 5.9% 24000 0 448 80000 1 0.7% 80  TOTAL 119 26000 0 485 84000 2 1.4% 84  >28000 0 0 >84000 10 6.8% >84  TOTAL 889 TOTAL 148  HPE 117 GATE1 253  MPE 159 GATE2 119	13	32	26.9%	20000	1	373			2		
TOTAL 119 26000 0 485 84000 2 1.4% 84 >28000 0 0 0 >84000 10 6.8% >84 TOTAL 889 TOTAL 148  HPE 117 GATE1 253 HPE 159 GATE2 119	14	20	16.8%	22000	0	410			2		
>28000 0 0 >84000 10 6.8% >84  TOTAL 889 TOTAL 148  HPE 117 GATE1 253  MPE 159 GATE2 119	15	7	5.9%	24000	0						
TOTAL 889 TOTAL 148  HPE 117 GATE1 253  MPE 159 GATE2 119	TOTAL	119		26000	0	485					
HPE 117 GATE1 253 MPE 159 GATE2 119				>28000	0	0				6.8%	>84
MPE 159 GATE2 119				TOTAL	889			TOTAL	148		
MPE 159 GATE2 119	<b>L</b>	oF.	117		GATE1	253					
··· -											

NOTE: REC code 1 = Source check; 2 = Empty belt; 3 = Test

2-SEC COUNT PERIODS



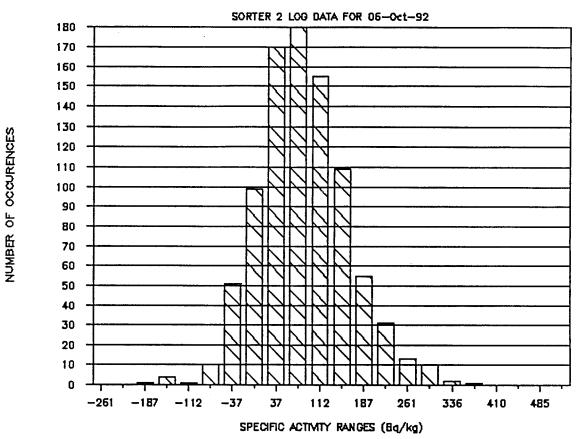


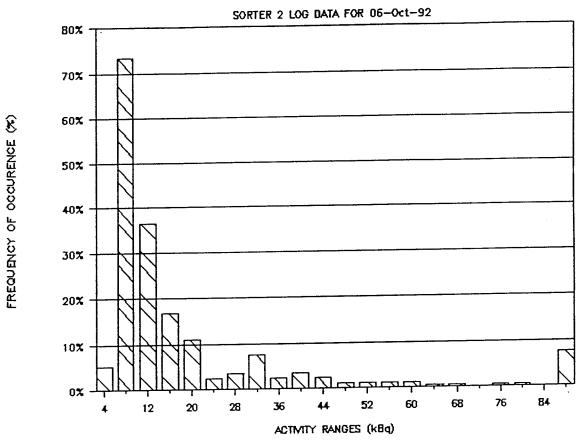
SORTER 2 06-Oct-92			
AVERAGE BACKGROUND COUNT RATE	0.78 ±	0.05 c/sec	
SORTER SOIL DENSITY	1.15 tons/m³		
GROUND SOIL DENSITY	1.65 tons/m <sup>3</sup>		
		CONTAMINATED	CLEAN
MASS TOTAL		0.38 tons	47.0 tons
MAXIMUM/SORT		5.4 kg	53.6 kg
MINIMUM/SORT		0.7 kg	48.2 kg
WEIGHT RECOVERY OR VOLUME RECOV	ERY		99.2%
EQUIVALENT SOIL-IN-GROUND		0.30 yd³	37.3 yd³ 37.6 yd³/day
PARTICLE ACTIVITY (MAXIMUM ESTI	MATE)		
TOTAL		6,617 kBq	
MAXIMUM/SORT		508 kBq	
MINIMUM/SORT		3.5 kBq	
DISPERSED + PARTICLE (REALISTIC	ESTIMATE) ACTIVITY	2,543 kBq	3,180 kBq
MAXIMUM/SORT		311 kBq	19 kBq
MINIMUM/SORT		0 Bq	-6 kBq
SPECIFIC ACTIVITY		6,701 Bq/kg	68 Bq/kg
WORK DAY			
WORK DAY START	07:00 AM		
PROCESSING START	10:56 AM		
PLANT STARTUP TIME		3.95 hr	
PROCESSING END	05:03 PM		
WORK DAY END	05:30 PM		
PLANT SHUTDOWN TIME		0.45 hr	
LUNCH PERIOD		0.5 hr	
WORK HOURS		10.0 hr	
MAX PROCESS HOURS (END-S	TART)	6.11 hr	
ACTUAL PROCESS HOURS (TO	TAL 20-SEC SORT PERIODS)	4.91 hr	
TOTAL SYSTEM PAUSE TIME		0.00 hr	
TOTAL DOWNTIME (MAX-ACTU	AL)	1.20 hr	
TIME UTILIZATION (ACTUAL	HRS/WORK HRS)	49.1%	
TOTAL SOIL PROCESSING RECORDS (	2-SEC and 20-SEC)	892	
NONPROCESS RECORDS (Test, calib	ration, etc)	8	
20-SEC PROCESS RECORDS		884	
TOTAL SORT		0 MD>0 & MND=0	
NO SORT		582 AD=0 & MD=0	& MND>0
SOME SORT		302 AD>0&0 <md<mn< td=""><td>Dmax&amp;MND<mndmax< td=""></mndmax<></td></md<mn<>	Dmax&MND <mndmax< td=""></mndmax<>
UNEXPLAINED REC	ORDS	0	
0 <ad<1kbq &="" md=""></ad<1kbq>	0 1		
	& MD 0		
AD<0	& MD 0		

2-SEC CO	OUNT PERIODS	8,840	
	2-SEC RECORDS WITH SORTS	309	AP>0
	2-SEC RECORDS WITH POSITIVES	IN >1 DETECTOR	
	2 DETECTORS	71	78.0%
	3 DETECTORS	18	19.8%
	4 DETECTORS	2	2.2%
	5 DETECTORS	0	0.0%
	6 DETECTORS	0	0.0%
	7 DETECTORS	0	0.0%
	8 DETECTORS	0	0.0%
	TOTAL	91	
	NET 2-SEC RECORDS WITH SORTS	218	3
	2-SEC PERIODS WITH NO SORTS	8,622	<u> </u>
	AVG TIME BETWEEN 2-SEC SORTS	81.1	sec
- 00075	162 ACT NO NUMBER	SPEC A	

1-GATE SC	DTC	162	ACT_ND	NUMBER	SPEC A	ACT_P	SORT	FREQ%	ACT_P
	SORTS	FREQ%	(Bq)		(Bq/kg)	(Bq)	(#)		(kBq)
DETECTO	SUKIS	FRLUM	(54)		<b>1 1</b>				
	10	8.1%	-14000	0	-261	4000	9	5.2%	4
1	29	23.6%	-12000	0	-224	8000	127	73.4%	8
2	41	33.3%	-10000	1	-187	12000	63	36.4%	12
3 4	29	23.6%	-8000	4	-149	16000	29	16.8%	16
5	22	17.9%	-6000	1	-112	20000	19	11.0%	20
	20	16.3%	-4000	10	-75	24000	4	2.3%	24
6 7	9	7.3%	-2000	51	-37	28000	6	3.5%	28
8	2	1.6%	0	99	0	32000	13	7.5%	32
	123	1.04	2000	170	37	36000	4	2.3%	36
TOTAL	123		4000	180	75	40000	6	3.5%	40
2 0475 60	DOTE	147	6000	155	112	44000	4	2.3%	44
2-GATE SO	SORTS	FREQ%	8000	109	149	48000	2	1.2%	48
DETECTO	SUKIS	IKLUM	10000	55	187	52000	2	1.2%	52
8 9	20	13.6%	12000	31	224	56000	2	1.2%	56
	20 35	23.8%	14000	13		60000	2	1.2%	60
10 11	28	19.0%	16000	10		64000	1	0.6%	64
	20	13.6%	18000	2		68000	. 1	0.6%	68
12	23	15.6%	20000	- 1		72000	0	0.0%	72
13 14	17	11.6%	22000	0		76000	1	0.6%	76
	4	2.7%	24000	0		80000	1	0.6%	80
15	147	Lin	26000	0		84000	0	0.0%	84
TOTAL	147		>28000	0		>84000	13	7.5%	>84
			TOTAL	892	·-	TOTAL	173		
			IOIAL	0,2					
H	PE	146		GATE1	309				
	PE	214		GATE2	147				
	ISE	0							

NOTE: REC code 1 = Source check; 2 = Empty belt; 3 = Test





SORTER 1 05-Oct-92	-		
AVERAGE BACKGROUND COUNT RATE	0.78 ±	0.05 c/sec	
SORTER SOIL DENSITY	1.15 tons/m	<sub>1</sub> 3	
GROUND SOIL DENSITY	1.65 tons/m	l <sup>3</sup>	
		CONTAMINATED	CLEAN
MASS TOTAL		0.60 tons	60.0 tons
MAXIMUM/SORT		6 kg	53.6 kg
MINIHUM/SORT		0.7 kg	47.5 kg
WEIGHT RECOVERY OR VOLUME RECOVE	RY		99.0%
EQUIVALENT SOIL-IN-GROUND	•••	0.48 yd³	47.5 yd <sup>3</sup> 48.0 yd <sup>3</sup> /day
		,	7 15 /C 1010 /G /GG/
PARTICLE ACTIVITY (MAXIMUM ESTIM	ATE)		1
TOTAL		9,234 kBq	
MAXIMUM/SORT		303 kBq	
MINIHUM/SORT		3.1 kBq	
DISPERSED + PARTICLE (REALISTIC	ESTIMATE) ACTIVITY	3,464 kBq	5,172 kBq
MAXIMUM/SORT		199 kBq	18 kBq
MINIMUM/SORT		0 Bq	-6 kBq
SPECIFIC ACTIVITY		5,775 Bq/kg	86 Bq/kg
WORK DAY			
WORK DAY START	07:00 AM		
PROCESSING START	07:36 AM		
PLANT STARTUP TIME		0.61 hr	
PROCESSING END	05:05 PM		
WORK DAY END	05:30 PM		
PLANT SHUTDOWN TIME		0.41 hr	
LUNCH PERIOD		0.5 hr	
WORK HOURS		10.0 hr	
MAX PROCESS HOURS (END-ST	ART)	9.48 hr	
ACTUAL PROCESS HOURS (TOTA		6.28 hr	
TOTAL SYSTEM PAUSE TIME	and the state of t	1.94 hr	
TOTAL DOWNTIME (MAX-ACTUAL	15	3.20 hr	
TIME UTILIZATION (ACTUAL I		62.7%	
TOTAL SOIL PROCESSING RECORDS (2-	·	1,223	
NONPROCESS RECORDS (Test, calibrates)	ation, etc)	8	
20-SEC PROCESS RECORDS		1,130	
TOTAL SORT		0 MD>0 & MND=0	
NO SORT		696 AD=0 & MD=0 &	MND>0
SOME SORT		434 AD>080 <hd<hnd< td=""><td>max&amp;MND<hndmax< td=""></hndmax<></td></hd<hnd<>	max&MND <hndmax< td=""></hndmax<>
UNEXPLAINED RECOR	DS	0	

0<AD<1kBq & MD>0

AD=0 & ND AD<0 & ND

0

2-SEC COUNT PERIODS					11,300						
		2-SEC RECORD	S WITH S	ORTS		527	AP>0				
		2-SEC RECORD			IN >1 DI	ETECTOR	•				
		2	DETECTO	RS	120		83.3%				
		3	DETECTO	RS	22		15.3%				
		4	DETECTO	RS	2		1.4%				
			5 DETECTORS				0.0%				
		6	DETECTO	RS	0		0.0%				
		7	DETECTO	RS	0		0.0%				
		8	DETECTO	RS	0		0.0%				
		T	OTAL			144					
		NET 2-SEC RE				383					
		2-SEC PERIOD				10,917					
		AVG TIME BET	WEEN 2-S	EC SORTS		59.0	sec				
1-GATE SO	ORTS	257	ACT_ND	NUMBER	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
DETECTO	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)
1	10		-14000	0	-261			4000	14	4.7%	4
2	29		-12000	0	-224			8000	218	73.9%	8
- 3	39		-10000	0	-187			12000	120	40.7%	12
4	48		-8000	2	-149			16000	42	14.2%	16
5	53		-6000	2	-112			20000	33	11.2%	20
6	38		-4000	7	-75 			24000	24	8.1%	24
7	30		-2000	24	-37			28000	14	4.7%	28
8	10		0	74	0			32000	4	1.4%	32
TOTAL	218		2000	176	37			36000	7	2.4%	36 40
			4000	233	75			40000	4	1.4%	44
2-GATE SO		270	6000	257	112			44000	4	1.4%	
DETECTO	SORTS	FREQ%	8000	189	149			48000	4	1.4%	48 52
8	-4	~ ~	10000	89	187			52000	2	0.7%	56
9	21	7.8%	12000	44	224			56000	3	1.0%	60
10	43	15.9%	14000	24	261			60000	2	0.7% 1.0%	64
11	50	18.5%	16000	13	299			64000	3	1.0%	68
12	51	18.9%	18000	4	336			68000	3		
13	49	18.1%	20000	0	373			72000	2	0.7%	72
14	35	13.0%	22000	0	410			76000	3	1.0%	76
15	21	7.8%	24000	0	448			B0000	3	1.0%	80 87
TOTAL	270		26000	0	485			84000	1	0.3%	84 >8/
			>28000	0	0		>	84000	17	5.8%	>84

1138

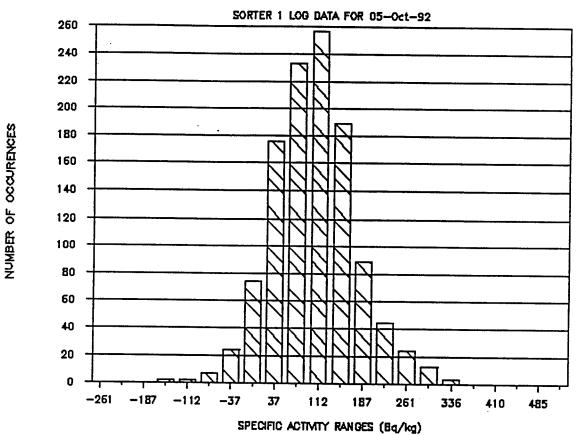
HPE 223 GATE1 527 301 270 MPE **GATE2** DISE

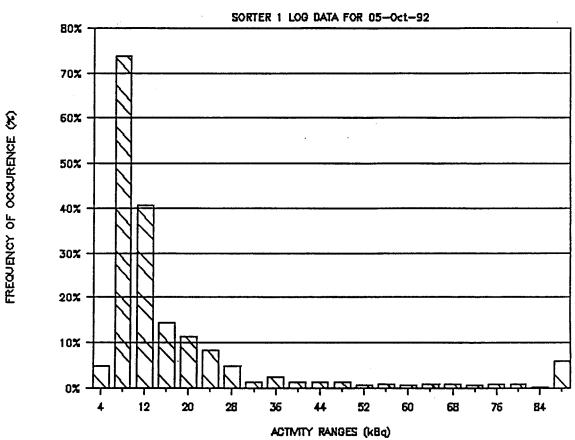
TOTAL

NOTE: REC code 1 = Source check; 2 = Empty belt; 3 = Test

TOTAL

295.





SORTER 2 05-Oct-92		-			
AVERAGE BACKGROUND COUNT RATE		0.79 ±	0.04 c/sec		
SORTER SOIL DENSITY		1.15 tons/m <sup>3</sup>	•		
GROUND SOIL DENSITY		1.65 tons/m <sup>3</sup>			
			CONTAMINATED	CLEAN	
MASS TOTAL			0.93 tons	59.1 tons	
MAXIMUM/SORT			53.6 kg	53.6 kg	
MINIMUM/SORT	•		0.7 kg	47.5 kg	
WEIGHT RECOVERY OR VOLUME RECO	VERY				98.5%
EQUIVALENT SOIL-IN-GROUND			0.74 yd³	46.9 yd³	47.6 yd3/day
PARTICLE ACTIVITY (MAXIMUM EST	IMATE)				
TOTAL			13,832 kBq		
MAXIMUM/SORT			769 kBq		
MINIMUM/SORT			3.7 kBq		
DISPERSED + PARTICLE (REALISTI	C ESTIMATE) ACTIV	/ITY	5,204 kBq	6,390 kBq	
MAXIMUM/SORT			420 kBq	20 kBq	
MINIMUM/SORT			0 Bq	-11 kBq	
SPECIFIC ACTIVITY			5,596 Bq/kg	108 Bq/kg	
WORK DAY					
WORK DAY START	07:00 AM				
PROCESSING START	07:59 AM				
PLANT STARTUP TIME			1.00 hr		
PROCESSING END	05:03 PM				
WORK DAY END	05:30 PM				
PLANT SHUTDOWN TIME			0.45 hr		
LUNCH PERIOD			0.5 hr		
WORK HOURS			10.0 hr		
MAX PROCESS HOURS (END-	START)		9.07 hr		
ACTUAL PROCESS HOURS (T	OTAL 20-SEC SORT	PERIODS)	6.23 hr		
TOTAL SYSTEM PAUSE TIME			1.54 hr		
TOTAL DOWNTIME (MAX-ACT			2.84 hr		
TIME UTILIZATION (ACTUA	L HRS/WORK HRS)		62.2%		
TOTAL SOIL PROCESSING RECORDS	(2-SEC and 20-SEC	:)	1,771		
NONPROCESS RECORDS (Test, cali	bration, etc)		21		
20-SEC PROCESS RECORDS			1,121		
TOTAL SORT			4 MD>0 & MND	=0	
NO SORT			608 AD=0 & MD=	0 & MND>0	
SOME SORT			509 AD>0&0 <md<< td=""><td>MNDmax&amp;MND<mndmax< td=""><td></td></mndmax<></td></md<<>	MNDmax&MND <mndmax< td=""><td></td></mndmax<>	
UNEXPLAINED RE	CORDS		0		

& MD>0 2 AD=0 & MD 1 AD<0 & MD 0

0<AD<1kBq & MD>0

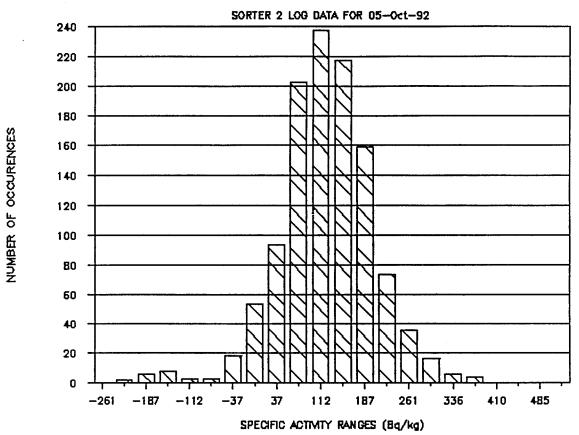
11,210

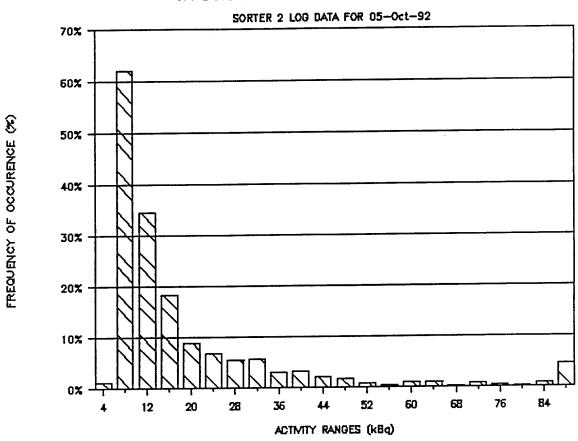
_	-	2-SEC RECORD	S WITH S	ORTS		650	AP>0				
		2-SEC RECORD			IN >1 DE	TECTOR					
			DETECTO		159		79.5%				
			DETECTO		33		16.5%				
			DETECTO		8		4.0%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
			OTAL			200					
		-									
		NET 2-SEC RE	CORDS WI	TH SORTS		450					
		2-SEC PERIOD	S WITH N	O SORTS		10,760					•
		AVG TIME BET	WEEN 2-S	EC SORTS		49.8	sec				
1-GATE SO	ORTS	329	ACT_ND	NUMBER	SPEC_A		AC	_		FREQ%	ACT_P
DETECTO	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)		(	Bq) (	#)		(kBq)
									_		
1	14	5.1%	-14000	0	-261			000	5		4
2	41	15.0%	-12000	2					47		8
3	70	25.5%	-10000	6	-187				37		12
4	71	25.9%	-8000	8	-149				<b>73</b>	18.3%	16
5	50	18.2%	-6000	3	-112				<b>3</b> 5		20
6	49	17.9%	-4000	3	-75				27		24
7	28	10.2%	-2000	18	-37				22		28
8	6	2.2%	0	54	0				23		32
TOTAL	274		2000	94	37				12		36
			4000	203	75				13		40
2-GATE SC		321	6000	238	112			000	8		44 48
DETECTO	SORTS	FREQX	8000	218	149			000	7		
8			10000	159	187			000	3		52 56
9	36	11.2X	12000	74	224			000	2		60
10	48	15.0%	14000	36	261			000			64
11	78	24.3%	16000	16	299			000	4		68
12	53	16.5%	18000	6	336			000	1		72
13	51	15.9%	20000	4	373			000	3		76
14	39	12.1%	22000	0	410			000	1		80
15	16	5.0%	24000	0	448			000	3		84
TOTAL	321		26000	0	485			000			>84
			>28000	0	0		>84		18		704
			TOTAL	1142			10	TAL 3	98		
		277		CATE1	450						
	PE	273		GATE1	650 721						
ME	PE	334		GATE2	321						

NOTE: REC code 1 = Source check; 2 = Empty belt; 3 = Test

DISE

2-SEC COUNT PERIODS





SORTER 1	03-0ct-92
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AVERAGE BACKGROUND COUNT RATE 0.77 ± 0.07 c/sec

SORTER SOIL DENSITY 1.15 tons/m³

GROUND SOIL DENSITY 1.65 tons/m³

CONTAMINATED

 CONTAMINATED
 CLEAN

 MASS TOTAL
 0.48 tons
 45.8 tons

 MAXIMUM/SORT
 5.4 kg
 53.6 kg

 MINIMUM/SORT
 0.7 kg
 48.2 kg

WEIGHT RECOVERY OR VOLUME RECOVERY

EQUIVALENT SOIL-IN-GROUND

0.38 yd³

36.3 yd³

36.7 yd³/day

0.48 hr

PARTICLE ACTIVITY (MAXIMUM ESTIMATE)

 TOTAL
 8,606 kBq

 MAXIMUM/SORT
 779 kBq

 MINIMUM/SORT
 2.7 kBq

 DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY
 3,037 kBq
 5,061 kBq

 MAXIMUM/SORT
 465 kBq
 17 kBq

 MINIMUM/SORT
 0 Bq
 -6 kBq

 SPECIFIC ACTIVITY
 6,347 Bq/kg
 111 Bq/kg

WORK DAY

WORK DAY START 07:00 AM
PROCESSING START 07:28 AM
PLANT STARTUP TIME

PROCESSING END 04:38 PM WORK DAY END 05:30 PM

PLANT SHUTDOWN TIME 0.87 hr

LUNCH PERIOD 0.5 hr
WORK HOURS 10.0 hr
MAX PROCESS HOURS (END-START) 9.16 hr
ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS) 4.79 hr
TOTAL SYSTEM PAUSE TIME 0.08 hr
TOTAL DOWNTIME (MAX-ACTUAL) 4.36 hr
TIME UTILIZATION (ACTUAL HRS/WORK HRS) 47.9%

TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 955
NONPROCESS RECORDS (Test, calibration, etc) 8

20-SEC PROCESS RECORDS 863

TOTAL SORT 0 MD>0 & MND=0

NO SORT 517 AD=0 & MD=0 & MND>0

SOME SORT 346 AD>0&0<MD<MNDmax&MND<MNDmax

UNEXPLAINED RECORDS 0

0<AD<1kBq & MD>0 0
AD=0 & MD 0
AD<0 & MD 0

438 AP>0

8,630

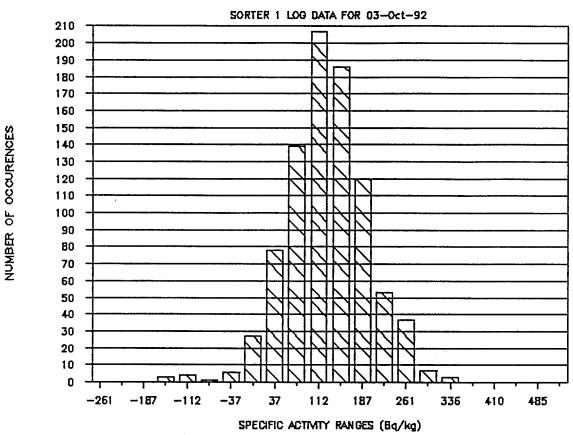
		2	DETECTO	RS	104	83.9%				
		3	DETECTO	RS	18	14.5%				
		4	DETECTO	RS	2	1.6%				
		5	DETECTO	RS	0	0.0%				
		6	DETECTO	RS	0	0.0%				
		7	DETECTO	RS	0	0.0%				
		8	DETECTO	RS	0	0.0%				
		1	OTAL			124				
						741				
		NET 2-SEC RE				314 9 314				
		2-SEC PERIOD AVG TIME BET				8,316 55.0 sec				
		AVG IIME BEI	MEEN 5-2	EC SURIS		JJ.0 Sec				
1-GATE SO	ORTS	217	ACT_ND	NUMBER	SPEC_A		ACT_P	SORT	FREQ%	ACT_P
DETECTO	SORTS		(Bq)		(Bq/kg)		(Bq)	(#)		(kBq)
• 1	3	1.6%	-14000	0	-261		4000	20	8.8%	4
2	25	13.2%	-12000	0	-224		8000	192	85.0%	8
3	32	16.9%	-10000	0	- 187		12000	83	36.7%	12
4	30	15.9%	-8000	3	-149		16000	40	17.7%	16
5	47	24.9%	-6000	4	-112		20000	20	8.8%	20
6	52	27.5%	-4000	1	-75		24000	15	6.6%	24
7	25		-2000	6	-37		28000	20	8.8%	28
8	3		0	27	0		32000	7	3.1%	32
TOTAL	189		2000	78	37		36000	4	1.8%	36
			4000	139	75		40000	2	0.9%	40
2-GATE SC		221	6000	207			44000	4	1.8%	44
DETECTO	SORTS	FREQX	8000	186	149		48000	1	0.4%	48
8			10000	120	187		52000	2	0.9%	52 E4
9	11		12000	53	224		56000	2	0.9%	56 60
10	29		14000	37			60000	1	0.4%	64
11	38		16000	7			64000 68000	2	0.9% 0.9%	68
12	41	18.6%	18000	3	336		72000	1	0.4%	72
13	56		20000	0	373		76000	1	0.4%	76
14	39		22000	0	410		80000	2	0.9%	80
15	7	3.2%	24000	0	448 485		84000	1	0.4%	84
TOTAL	221		26000	0	465		<b>84000</b>	16	7.1%	>84
			>28000	871	U	•	TOTAL	226		-04
			TOTAL	6/1			TOTAL	220		
KF	PΕ	188	4	GATE1	438					
ME		223		GATE2	221					
	ISE	.0								-

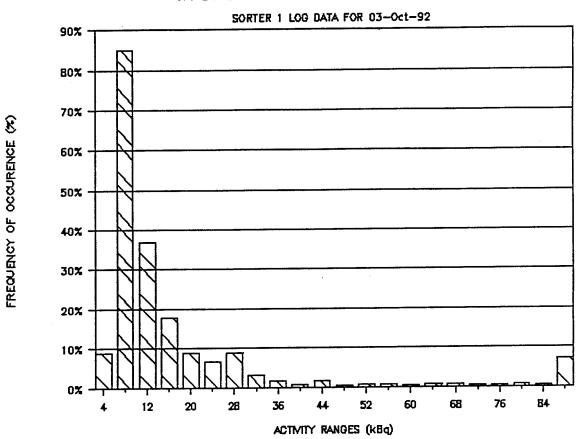
NOTE: REC code 1 = Source check; 2 = Empty belt; 3 = Test

2-SEC COUNT PERIODS

2-SEC RECORDS WITH SORTS

2-SEC RECORDS WITH POSITIVES IN >1 DETECTOR





SORTER 2	03-0ct-92		-							
AVERAGE BACKGRO	UND COUNT RATE		0.81	±	0.07	c/sec				
SORTER SOIL DEN	SITY		1.15	tons/m <sup>3</sup>	5					
GROUND SOIL DEN	SITY		1.65	tons/m³	ı					
						CONTAM	INATED	CLEAN		
MASS TOTAL						0.67	tons	44.7	tons	
MAXIMUM/	SORT					5.4	kg	53.6	kg	
MINIMUM/	SORT					0.7	kg	48.2	kg	
WEIGHT RECOVERY	OR VOLUME RECOVER	RY								98.5%
EQUIVALENT SOIL	- IN-GROUND					0.53	yd³	35.4	yd³	36.0 yd3/day
PARTICLE ACTIVIT	TY (MAXIMUM ESTIMA	ITE)								
TOTAL						9,908	kBq			
MAXIMUM/S	SORT					252	kBq			
MINIMUM/	SORT					3.4	kBq			
DISPERSED + PART	TICLE (REALISTIC E	STIMATE) ACTIVI	ITY			3,930	kBq	5,305	kBq	
MAXIMUM/S	SORT						kBq	17	-	
MINIMUM/S	SORT	•				0	Bq	-6	kBq	
SPECIFIC	ACTIVITY					5,893	Bq/kg	119	Bq/kg	
WORK DAY										
WORK DAY	START	07:00 AM								
PROCESSI	NG START	07:28 AM								
PLANT STA	ARTUP TIME						0.48 hr			
PROCESSIA	NG END	04:37 PM								
WORK DAY	END	05:30 PM								
PLANT SHU	JTDOWN TIME						0.88 hr			
LUNCH PER							0.5 hr			
WORK HOUR							10.0 hr			
	SS HOURS (END-STA	Ť					9.14 hr			
	ROCESS HOURS (TOTA	L 20-SEC SORT P	ERIODS	<b>5)</b>			4.71 hr			
	STEM PAUSE TIME						0.00 hr			
	MTIME (MAX-ACTUAL	·					4.44 hr			
TIME UTIL	.IZATION (ACTUAL H	RS/WORK HRS)					47.0%			
	SSING RECORDS (2-	· ·				942				
NONPROCESS RECOR	DS (Test, calibra	tion, etc)				11				
20-SEC PR	OCESS RECORDS					847				
	TOTAL SORT					0	MD>0 & MND=0			
	NO SORT					396	AD=0 & MD=0 &	MND>0		

File S2JA1003.WR1

SOME SORT

UNEXPLAINED RECORDS

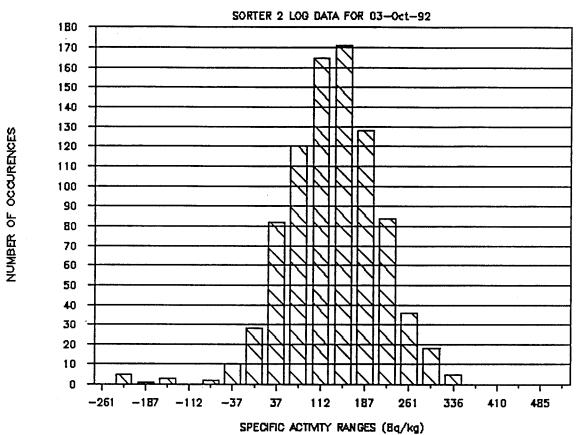
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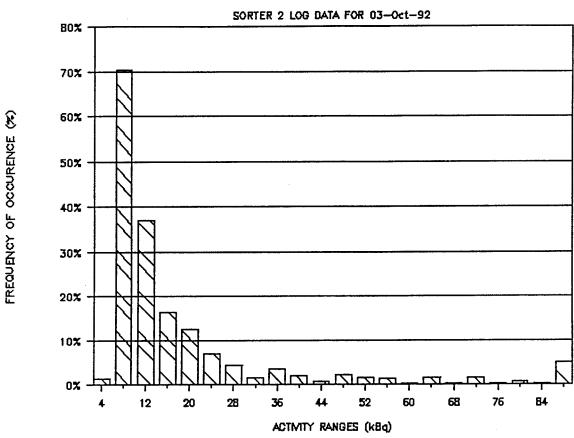
AD=0 & MD AD<0 & MD 451 AD>0&0<MD<MNDmax&MND<MNDmax

0

2.	-SEC CO	UNT PERIODS				8,470				
_		2-SEC RECORD	S WITH S	ORTS			AP>0			
		2-SEC RECORD			IN >1 DE					
			DETECTO		126		88.1%			
			DETECTO		17		11.9%			
			DETECTO		0		0.0%			
			DETECTO		0		0.0%			
			DETECTO		0		0.0%			
			DETECTO		0		0.0%			
			DETECTO		0		0.0%			
			OTAL			143				
		·								
NET 2-SEC RECORDS WITH SORTS						403				
		2-SEC PERIOD	S WITH N	O SORTS		8,067				
		AVG TIME BET	WEEN 2-S	EC SORTS		42.0	sec			
1-GATE SO	ישרפי	280	ACT_ND	NIMRED	SPEC_A		ACT_P	SORT	FREQ%	ACT_P
DETECTO	SORTS		(Bq)		(Bq/kg)		(Bq)		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	(kBq)
0212010	OOKIO	110	(54)	\-,	(04) (8)		(54)	<b>\"</b>		(1104)
1	4	1.6%	-14000	0	-261		4000	4	1.3%	4
2	26	10.4%	-12000	5	-224		8000	224	70.4%	8
3	50	20.0%	-10000	1	-187		12000	118	37.1%	12
4	55	22.0%	-8000	3	-149		16000	52	16.4%	16
5	49	19.6%	-6000	0	-112		20000	40	12.6%	20
6	50	20.0%	-4000	2	-75		24000	22	6.9%	24
7	37	14.8%	-2000	10	-37		28000	14	4.4%	28
8	9	3.6%	0	28	0		32000	5	1.6%	32
TOTAL	250		2000	82	37		36000	11	3.5%	36
			4000	120	75		40000	6	1.9%	40
2-GATE SC	DRTS	266	6000	165	112		44000	2	0.6%	44
DETECTO	SORTS	FREQ%	8000	171	149		48000	7	2.2%	48
8			10000	128	187		52000	5	1.6%	52
9	16	6.0%	12000	84	224		56000	4	1.3%	56
10	30	11.3%	14000	36	261		60000	1	0.3%	60
11	58	21.8%	16000	18	299		64000	5	1.6%	64
12	51	19.2%	18000	5	336		68000	1	0.3%	68
13	51	19.2%	20000	0	373		72000	5	1.6%	72
14	40	15.0%	22000	0	410		76000	1	0.3%	76
15	20	7.5%	24000	0	448		80000	2	0.6%	80
TOTAL	266		26000	0	485		84000	1	0.3%	84
			>28000	0	0		>84000	16	5.0%	>84
			TOTAL	858			TOTAL	318		
un	E	231		CATE1	546					
nr MP	•	338		SATE2	266					
	SE	-0	,	ant LE	200					
DI	JE	·U								

NOTE: REC code 1 = Source check; 2 = Empty belt; 3 = Test





SORTER 1 02-Oct-92	-						
AVERAGE BACKGROUND COUNT RATE	0.	78 ±	0.04 c/sec				
SORTER SOIL DENSITY	1.	15 tons/m³					
GROUND SOIL DENSITY	1.	65 tons/m³					
			CONTA	MINATED	CLEAN		
MASS TOTAL				9 tons	74.8 t	ons	
MAXIMUM/SORT				6 kg	53.6 k	-	
MINIMUM/SORT			0.	7 kg	47.5 k	g	
WEIGHT RECOVERY OR VOLUME RECO	VERY						98.8%
EQUIVALENT SOIL-IN-GROUND			0.7	1 yd³	59.3 y	q <sub>3</sub>	60.0 yd3/day
PARTICLE ACTIVITY (MAXIMUM EST	IMATE)						
TOTAL			15,043	5 kBq			
MAXIHUM/SORT			857	7 kBq			
MINIMUM/SORT			3.1	l k8q			
DISPERSED + PARTICLE (REALISTI	C ESTIMATE) ACTIVITY		5,329	kBq	6,087 ki	Bq	
MAXIMUM/SORT				kBq	17 ki	-	
MINIHUM/SORT			(	) Bq	-8 ki	Bq	
SPECIFIC ACTIVITY			5,978	Bq/kg	81 Bo	q/kg	
WORK DAY							
WORK DAY START	07:00 AM						
PROCESSING START	07:40 AM						
PLANT STARTUP TIME				0.68 hr			
PROCESSING END	05:06 PM						
WORK DAY END	05:30 PM						
PLANT SHUTDOWN TIME				0.40 hr			
LUNCH PERIOD				0.5 hr			
WORK HOURS				10.0 hr			
MAX PROCESS HOURS (END-S				9.43 hr			
ACTUAL PROCESS HOURS (TO	TAL 20-SEC SORT PERI	(200)		7.84 hr			
TOTAL SYSTEM PAUSE TIME				0.00 hr			
TOTAL DOWNTIME (MAX-ACTU	-•			1.59 hr			
TIME UTILIZATION (ACTUAL	. HRS/WORK HRS)			78.4%			
TOTAL SOIL PROCESSING RECORDS (			1,601				
NONPROCESS RECORDS (Test, calib	ration, etc)		47				
20-SEC PROCESS RECORDS			1,412				
TOTAL SORT				MD>0 & MND=0			
NO SORT			821	AD=0 & MD=0 8	MND>0		
SOME SORT			590	AD>0&0 <and< td=""><td>max&amp;MND<mndm< td=""><td>ax</td><td></td></mndm<></td></and<>	max&MND <mndm< td=""><td>ax</td><td></td></mndm<>	ax	
INEVDIATION DEC	ODDO		_				

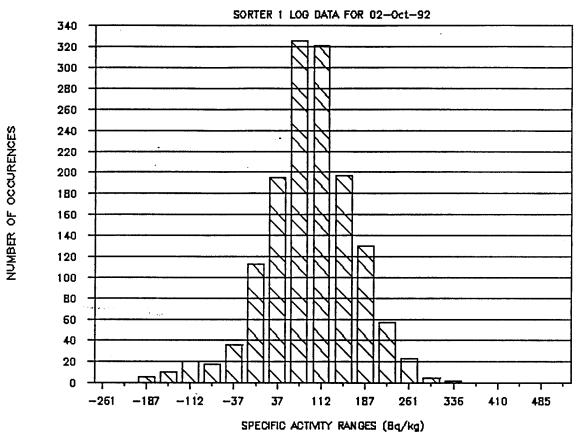
UNEXPLAINED RECORDS

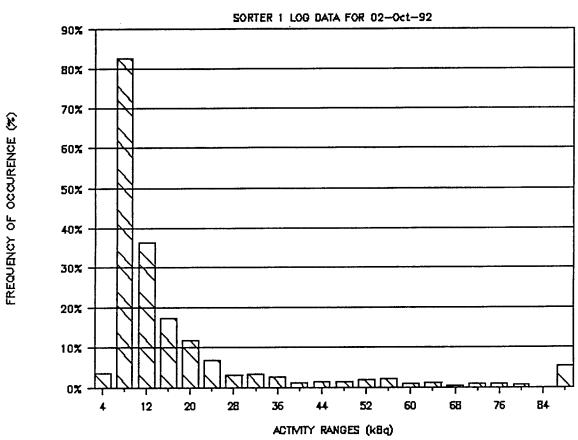
0<AD<1kBq & MD>0 0
AD=0 & MD 0
AD<0 & MD 0

0

2	-SEC CO	UNT PERIODS				14,120					
-		2-SEC RECORD	S WITH S	ORTS			AP>0				
		2-SEC RECORD			TM >1 DI						
			DETECTO		167		87.0%				
			DETECTO		20		10.4%				
			DETECTO		5		2.6%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
			DETECTO		0		0.0%				
			OTAL	N.J	•	192	0.0.0				
		•	OIAL			.,_					
NET 2-SEC RECORDS WITH SORTS				588							
	2-SEC PERIODS WITH NO SORTS				13,532						
		AVG TIME BET	WEEN 2-S	EC SORTS		48.0	sec				
4 0477 0	0070	702	ACT_ND	NI MOED	SPEC_A			ACT_P	SORT	FREQ%	ACT_P
1-GATE S		392 FREQX	_		(Bq/kg)		•	(Bq)	(#)		(kBq)
DETECTO	SORTS	FREMA	(pg)	(#)	(pd) v8)			(54)	\",		44,
1	12	3.6%	-14000	0	-261			4000	16	3.8%	4
2	52		-12000	0	-224			8000	347	82.6%	8
3	62		-10000	6	-187		•	12000	153	36.4%	12
4	58		-8000	10	-149		•	16000	72	17.1%	16
5	73		-6000	20	-112			20000	49	11.7%	20
6	77		-4000	18				24000	29	6.9%	24
7	50		-2000	36	-37		;	28000	13	3.1%	28
8	9		0	113	0		3	32000	14	3.3%	32
TOTAL	329	٠	2000	195	37		:	36000	11	2.6%	36
			4000	326	75		4	40000	5	1.2%	40
2-GATE S	ORTS	388	6000	321	112		4	44000	6	1.4%	44
DETECTO	SORTS	FREQ%	8000	197	149			48000	6	1.4%	48
8			10000	130	187			52000	8	1.9%	52
9	26	6.7%	12000	57	224		• !	56000	9	2.1%	56
10	51	13.1%	14000	23	261			60000	4	1.0%	60
11	66	16.9%	16000	5	299			64000	5	1.2%	64
12	74		18000	2	336			68000	2	0.5%	68
13	78		20000	0	373		;	72000	4	1.0%	72
14	72			0	410		•	76000	4	1.0%	76
15	23			0	448		1	B0000	3	0.7%	80
TOTAL	390		26000	0			1	84000	0	0.0%	84
			>28000	0			>{	B4000	23	5.5%	>84
			TOTAL	1459				TOTAL	420		
H	PE	334		GATE1	780						
M	PE	387		GATE2	388						
D	ISE	1									

NOTE: REC code 1 = Source check; 2 = Empty belt; 3 = Test





SORTER 2 02-0ct-92 AVERAGE BACKGROUND COUNT RATE 0.79 ± 0.04 c/sec SORTER SOIL DENSITY 1.15 tons/m<sup>3</sup> 1.65 tons/m<sup>3</sup> GROUND SOIL DENSITY CONTAMINATED CLEAN MASS TOTAL 1.09 tons 75.2 tons MAXIMUM/SORT 53.6 kg 53.6 kg MINIMUM/SORT 0.7 kg 45.5 kg WEIGHT RECOVERY OR VOLUME RECOVERY 98.6% EQUIVALENT SOIL-IN-GROUND 0.87 yd3 59.6 yd3 60.5 yd3/day PARTICLE ACTIVITY (MAXIMUM ESTIMATE) TOTAL 26,115 kBq MAXIMUM/SORT 2,186 kBq MINIMUM/SORT 3.3 kBq DISPERSED + PARTICLE (REALISTIC ESTIMATE) ACTIVITY 9,413 kBq 6,392 kBq MAXIMUM/SORT 1610 kBq 17 kBq MINIMUM/SORT 0 Bq -12 kBq SPECIFIC ACTIVITY 8,618 Bq/kg 85 Bq/kg WORK DAY WORK DAY START 07:00 AM PROCESSING START 07:40 AM PLANT STARTUP TIME 0.68 hr PROCESSING END 05:03 PM WORK DAY END 05:30 PM PLANT SHUTDOWN TIME 0.46 hr LUNCH PERIOD 0.5 hr WORK HOURS 10.0 hr MAX PROCESS HOURS (END-START) 9.37 hr ACTUAL PROCESS HOURS (TOTAL 20-SEC SORT PERIODS) 7.91 hr TOTAL SYSTEM PAUSE TIME 0.00 hr TOTAL DOWNTIME (MAX-ACTUAL) 1.46 hr TIME UTILIZATION (ACTUAL HRS/WORK HRS) 79.0% TOTAL SOIL PROCESSING RECORDS (2-SEC and 20-SEC) 2,314 NONPROCESS RECORDS (Test, calibration, etc) 36 20-SEC PROCESS RECORDS 1,424 TOTAL SORT 1 MD>0 & MND=0 NO SORT 727 AD=0 & MD=0 & MND>0

File S2JA1002.WR1

10:26:38

10:40:38

SOME SORT

UNEXPLAINED RECORDS

AD=0 & MD

AD<0 & ND

2

0<AD<1kBq & MD>0

694 AD>0&0<MD<MNDmax&MND<MNDmax

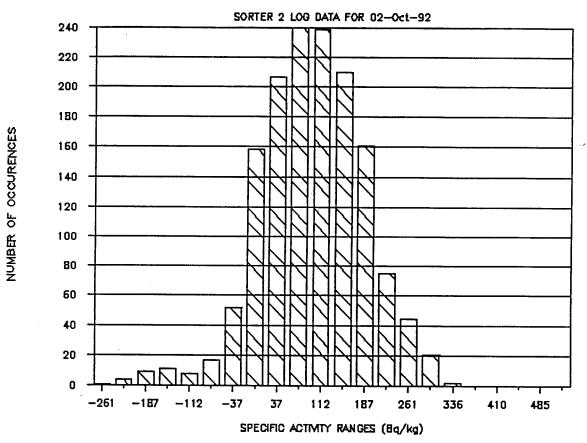
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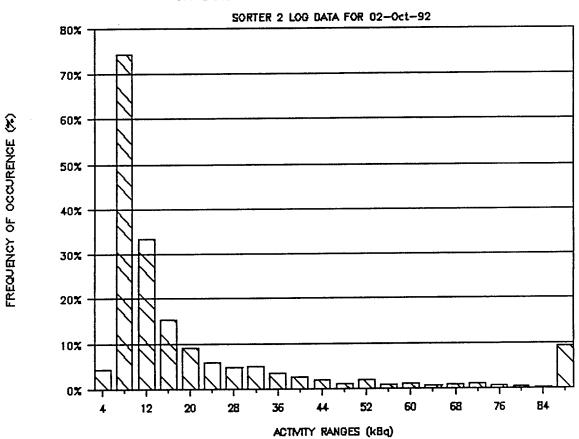
14,240

-		2-SEC RECORD	S UITH S	ORTS		890	AP>0				
		2-SEC RECORD			IN >1 DE						
			DETECTO		191		76.1%				
			DETECTO		50		19.9%				
			DETECTO		8		3.2%				
			DETECTO		2		0.8%				
		_	DETECTO		0		0.0%				
			DETECTO	*	0		0.0%				
			DETECTO		0		0.0%				
			OTAL	KS	·	251	0.02				
		•	UIAL			,					
		NET 2-SEC RE	CORDS WI	TH SORTS		639					
		2-SEC PERIOD				13,601					
		AVG TIME BET				44.6	sec				
1-GATE SO	ORTS	446	ACT_ND	NUMBER	SPEC_A			ACT_P		FREQ%	ACT_P
DETECTO	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)
1	15	4.1%	-14000	1	-261			4000	22	4.4%	4
2	61	16.5%	-12000	4				8000	370	74.3%	8
3	119		-10000	9				12000	166	33.3%	12
4	77		-8000	11				16000	76	15.3%	16
5	61	16.5%	-6000	8				20000	45	9.0%	20
6	58		-4000	17				24000	29	5.8%	24
7	47		-2000	52				28000	24	4.8%	28
8	8		0	158			:	32000	25	5.0%	32
TOTAL	370		2000	207			:	36000	17	3.4%	36
		•	4000	240				40000	13	2.6%	40
2-GATE SO	ORTS	444	6000	239				44000	10	2.0%	44
DETECTO	SORTS		8000	210	149			48000	6	1.2%	48
8			10000	161	187			52000	10	2.0%	52
9	35	7.9%	12000	75	224			56000	5	1.0%	56
10	70		14000	45	261			60000	6	1.2%	60
11	114	25.7%	16000	21	299			64000	3	0.6%	64
12	76	17.1%	18000	2	336			68000	5	1.0%	68
13	66	14.9%	20000	0	373			72000	6	1.2%	72
14	56	12.6%	22000	0	410			76000	3	0.6%	76
15	27		24000	0	448			80000	2	0.4%	80
TOTAL	444		26000	0	485			84000	1	0.2%	84
			>28000	0	0		>	84000	46	9.2%	>84
			TOTAL	1459				TOTAL	498		
ur	PE	383		GATE1	890						
	PE	506		GATE2	444						
	ISE	1		··- <del>-</del>	•						•

NOTE: REC code 1 = Source check; 2 = Empty belt; 3 = Test

2-SEC COUNT PERIODS





SORTER 1 01-Oct-92	-		
AVERAGE BACKGROUND COUNT RATE	0.78 ± 0	.06 c/sec	
SORTER SOIL DENSITY	1.15 tons/m <sup>3</sup>		
GROUND SOIL DENSITY	1.65 tons/m <sup>3</sup>		
		CONTAMINATED	CLEAN
MASS TOTAL		2.89 tons	55.3 tons
MAXIMUM/SORT		53.6 kg	53.6 kg
MINIMUM/SORT		0.7 kg	48.2 kg
WEIGHT RECOVERY OR VOLUME RECOVER	RY		95.0%
EQUIVALENT SOIL-IN-GROUND		2.29 yd3	43.8 yd³ 46.1 yd³/day
		·	
PARTICLE ACTIVITY (MAXIMUM ESTIMA	ATE)		
TOTAL		8,554 kBq	
MAXIMUM/SORT		383 kBq	
MINIMUM/SORT		3.2 kBq	
DISPERSED + PARTICLE (REALISTIC E	STIMATE) ACTIVITY	4,618 kBq	8,310 kBq
MAXIMUM/SORT		204 kBq	20 kBq
MINIMUM/SORT		0 Bq	-10 kBq
SPECIFIC ACTIVITY		1,599 Bq/kg	150 Bq/kg
WORK DAY			
WORK DAY START	07:00 AM		
PROCESSING START	08:41 AM		
PLANT STARTUP TIME		1.69 hr	
PROCESSING END	04:50 PM		
WORK DAY END	05:30 PM		
PLANT SHUTDOWN TIME		0.67 hr	
LUNCH PERIOD		0.5 hr	
WORK HOURS		10.0 hr	
MAX PROCESS HOURS (END-STA	RT)	8.16 hr	
ACTUAL PROCESS HOURS (TOTA	L 20-SEC SORT PERIODS)	6.03 hr	
TOTAL SYSTEM PAUSE TIME		2.14 hr	
TOTAL DOWNTIME (MAX-ACTUAL	)	2.13 hr	
TIME UTILIZATION (ACTUAL H	RS/WORK HRS)	60.2%	
TOTAL SOIL PROCESSING RECORDS (2-	SEC and 20-SEC)	1,059	
NONPROCESS RECORDS (Test, calibra		10	
20-SEC PROCESS RECORDS		1,085	
TOTAL SORT		40 MD>0 & MND=0	)
NO SORT		531 AD=0 & MD=0	& MND>0
SOME SORT		514 AD>0&0 <md<ma< td=""><td>IDmax&amp;MND<mndmax< td=""></mndmax<></td></md<ma<>	IDmax&MND <mndmax< td=""></mndmax<>
UNEXPLAINED RECOR	DS	0	
0 <ad<1kbq &="" md="">0</ad<1kbq>	2		
AD=0 &	MD 0		
AD<0 &	MD 0		

A-677

2-	-SEC CO	UNT PERIODS			-	10,850					
_		2-SEC RECORD	S WITH S	ORTS		526	AP>0				
		2-SEC RECORD			IN >1 DE	TECTOR					
			DETECTO		107		84.3%				
		3	DETECTO	RS	18		14.2%				
		4	DETECTO	RS	2		1.6%				
		5	DETECTO	RS	0		0.0%				
		6	DETECTO	RS	0		0.0%				
		7	DETECTO	RS	0		0.0%				
		8	DETECTO	RS	0		0.0%				
		T	OTAL			127					
		NET 2-SEC RE	coppe ut	2TQO2 UT		399					
		2-SEC PERIOD				10,451					
		AVG TIME BET				54.4	sec	•			
		MAG LINE DEL	MLLN 2 3	LC CONTO							
1-GATE SC	ORTS	265	ACT_ND	NUMBER	SPEC_A			ACT_P		FREQ%	ACT_P
DETECTO	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			(Bq)	(#)		(kBq)
			44000		-261			4000	19	7.6%	4
1	10		-14000	0	-224			8000		103.6%	8
2	22		-12000	1	-187			12000	97	39.0%	12
3	26		-10000 -8000	2	-149			16000	43	17.3%	16
4	39		-6000	7	-112			20000	24	9.6%	20
5	65	27.9% 23.6%	-4000	18	-75			24000	13	5.2%	24
6	55 45	19.3%	-2000	27	-37			28000	14	5.6%	28
7	45 3		-2000	76	0			32000	12	4.8%	32
8	233		2000	62	37			36000	8	3.2%	36
TOTAL	2.3.3		4000	85	75			40000	2	0.8%	40
2 CATE CO	DOTE	261	6000	123	112			44000	4	1.6%	44
2-GATE SO	SORTS	FREQ%	8000	139	149			48000	4	1.6%	48
8	30K13	INCER	10000	169	187			52000	2	0.8%	52
9	14	5.4%	12000	138	224			56000	0	0.0%	56
	22	8.4%	14000	115	261			60000	0	0.0%	60
10 11	36	13.8%	16000	70	299			64000	5	2.0%	64
12	54	20.7%	18000	41	336			68000	2	0.8%	68
13	70	26.8%	20000	21	373			72000	2	0.8%	72
13	70 50	19.2%	22000	0	410			76000	2	0.8%	76
15	50 15	5.7%	24000	0	448			80000	1	0.4%	80
15	15	3.1%	24000	•	/OE			84000	Λ		84

485

0

1095

0

HPE 247 GATE1 526 MPE 442 GATE2 261 DISE 40

26000

>28000

TOTAL

NOTE: REC code 1 = Source check; 2 = Empty belt; 3 = Test

84000

>84000

TOTAL

0

14

249

0.0%

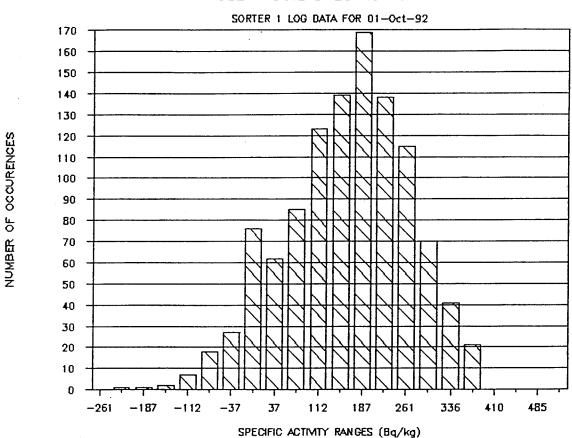
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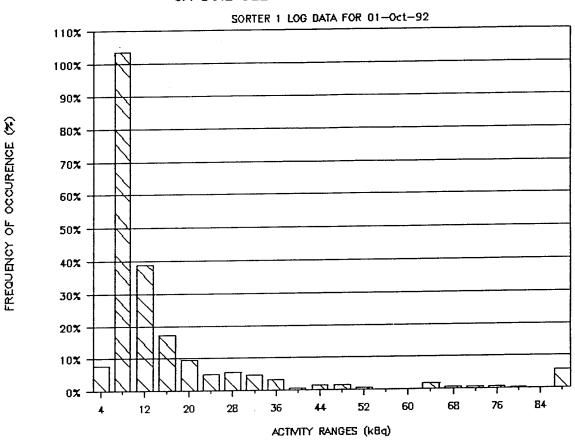
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>84

TOTAL

261





SORTER 2	01-0ct-92		-									
AVERAGE BACKGROU	IND COUNT RATE		0.79	±	0.05	c/sec						
SORTER SOIL DENS			1.15	tons/m	3	-						
GROUND SOIL DENS				tons/m								
						CONTAM	INATED		CLEAN			
MASS TOTAL						6.04	tons		51.6	tons		
MAXIMUM/S	ORT					53.6	kg		53.6	kg		
MINIMUM/S	ORT					0.7	kg kg		45.5	kg		
WEIGHT RECOVERY	OR VOLUME RECOVERY										89.5%	
EQUIVALENT SOIL-						4.79	vq3		40.9	yd³	45.7 yo	³/dav
24077712117 0012							,-			, -	,,,,	,,
PARTICLE ACTIVIT	Y (MAXIMUM ESTIMATE	:)										
. TOTAL						10,328	•					
MAXIMUM/S							kBq					
MINIMUM/S	ORT					3.3	kBq					
DISPERSED + PART	ICLE (REALISTIC EST	IMATE) ACTIV	ITY			7,416	kBq		7,750	kBq		
MAXIMUM/S						-	kBq			kBq		
MINIMUM/S						-373	•		-11	kBq		
SPECIFIC						1,228	Bq/kg		150	Bq/kg		
LINDY DAY												
WORK DAY WORK DAY	CTADT	07:00 AM										
PROCESSIN		08:40 AM										
PLANT STAI		00.40 AN					1.68 h	ar.				
PROCESSING		04:47 PM					1.00 1	••				
WORK DAY E		05:30 PM										
PLANT SHUT							0.71 H	าก				
LUNCH PERI							0.5 h					
WORK HOURS							10.0 h					
	SS HOURS (END-START	-					8.12 h					
	OCESS HOURS (TOTAL	20-SEC SOKT F	EK 100:	5)			5.98 h					
	TEM PAUSE TIME						0.00 h					
	ITIME (MAX-ACTUAL)	#1001/ HD01					2.14 h	ır				
TIME UTILI	ZATION (ACTUAL HRS	/WUKK HKS)					59.7%					
TOTAL SOIL PROCES	SSING RECORDS (2-SE	C and 20-SEC)	)			1,697						
NONPROCESS RECORD	S (Test, calibrati	on, etc)				19						
20-SEC PPC	OCESS RECORDS					1,076						
	OTAL SORT						MD>0 & MN	ID=0				
	IO SORT						AD=0 & MD		>0			
	OME SORT						AD>0&0 <md< td=""><td></td><td></td><td>Dmax</td><td></td><td></td></md<>			Dmax		
	NEXPLAINED RECORDS					2						
	<ad<1kbq &="" md="">0</ad<1kbq>		21:16			-						
	1:17:16 AD=0 & MI		21:36									

10:43:56 11:20:16 AD<0 & MD 2 11:21:56

2-	SEC COL	NT PERIODS			-	10,760					
_		2-SEC RECORD	S WITH S	ORTS		621	AP>0				
		2-SEC RECORD	S WITH P	OSITIVES	IN >1 DE	TECTOR					
			DETECTO		128		85.3%				
		3	DETECTO	RS	20		13.3%				
			DETECTO		1		0.7%				
		5	DETECTO	RS	1		0.7%				
	6 DETECTORS				0		0.0%				
7 DETECTORS				0		0.0%					
		8	DETECTO	RS	0		0.0%				
		T	OTAL			150					
		NET 2-SEC RE	CORDS WI	TH SORTS		471					
		2-SEC PERIOD	S WITH N	O SORTS		10,289					
AVG TIME BETWEEN 2-SEC SORTS						45.7	sec				
					0050 4			ACT_P	SUBT	FREQ%	ACT_P
1-GATE S		294	ACT_ND		SPEC_A			(Bq)	(#)	IKLUM	(kBq)
DETECTO	SORTS	FREQ%	(Bq)	(#)	(Bq/kg)			СРФУ	(#)		(1.04)
_		2.0%	-14000	1	-261			4000	21	7.4%	4
1	5	14.2%	-12000	4	-224			8000	316	111.3%	8
2	36 62	24.5%	-10000	4	-187			12000	107	37.7%	12
3 4	57	22.5%	-8000	3	-149			16000	53	18.7%	16
5	57	22.5%	-6000	6	-112			20000	27	9.5%	20
6	41	16.2%	-4000	27	-75			24000	11	3.9%	24
7	33	13.0%	-2000	39	-37			28000	15	5.3%	28
8	3	1.2%	0	145	0			32000	6	2.1%	32
TOTAL	253	******	2000	60	37			36000	8	2.8%	36
TOTAL	23.7		4000	69	75			40000	6	2.1%	40
2-GATE S	ORTS	327	6000	109	112			44000	8	2.8%	44
DETECTO	SORTS	FREQ%	8000	113	149			48000	4	1.4%	48
8			10000	112	187			52000	4	1.4%	52
•									,	4 / 9/	54

>28000

TOTAL

4.3%

13.8%

21.7%

19.3%

15.9%

13.1%

11.9%

HPE	278	GATE1	621
MPE	566	GATE2	327
DISE	96		

NOTE: REC code 1 = Source check; 2 = Empty belt; 3 = Test

>84

1.4%

0.7%

1.1%

0.4%

1.1%

0.7%

0.4%

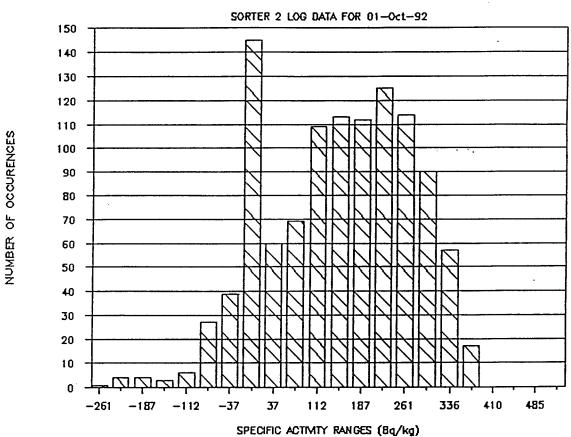
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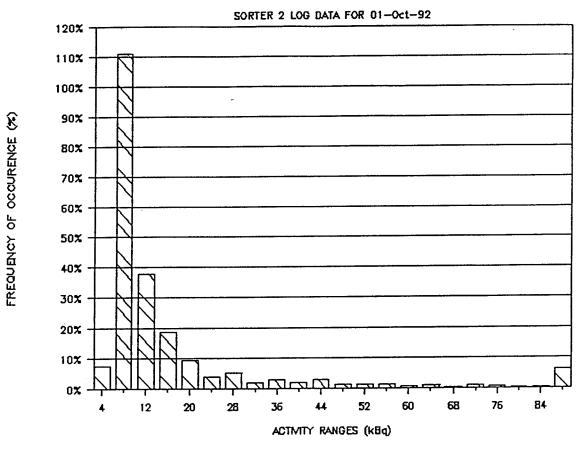
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TOTAL

TOTAL





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DNA-TR-93-168-V2

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ATTN: LE JOHN EDDY

DEFENSE TECHNICAL INFORMATION CENTER

2 CY ATTN: DTIC/OC

FIELD COMMAND DEFENSE NUCLEAR AGENCY

3 CY ATTN: FCIEE MAJ JOSEPH KIMBRELL

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